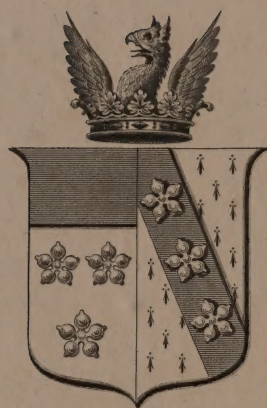


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Henry Stone.

GENERAL ZOOLOGY

or

SYSTEMATIC NATURAL HISTORY

by

GEORGE SHAW, M.D. F.R.S. &c.

WITH PLATES

from the first Authorities and most select specimens

Engraved principally by

MR. HEATH.



VOL. III. Part II.

AMPHIBIA.

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GENERAL ZOOLOGY.

VOLUME III.—PART II.

AMPHIBIA.

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1802.

CONTENTS

OF

VOL. III.—PART II.

	Page		Page
ACROCHORDUS GENUS		Boa, crotaline . . .	352
573		— fasciated . . .	353
— Java . . .	573	— viperine . . .	355
— doubtful . . .	575	— lineated . . .	356
— fasciated . . .	576	— Horatta . . .	359
		— Siamese . . .	360
ANGUIS GENUS . . .	578	— hog-nosed . . .	361
		— palpebral . . .	362
AMPHISBÆNA GENUS . . .	591	— annulated . . .	363
— white . . .	591		
— fuliginous . . .	593	CROTALUS GENUS . . .	317
BOA GENUS . . .	337	COLUBER GENUS . . .	364
— Constrictor . . .	337		
— ringed . . .	344	CÆCILIA GENUS . . .	595
— water . . .	345	— eel-shaped . . .	595
— brown . . .	345	— white-sided . . .	596
— canine . . .	346	— slender . . .	597
— royal . . .	347		
— embroidered . . .	348	HYDRUS GENUS . . .	555
— garden . . .	350	— colubrine . . .	556
— rat . . .	351	— Caspian . . .	557

Hydrus, great . . .	558	Snake, broad-cheeked . . .	428
— slender . . .	560	— fierce . . .	429
— blueish . . .	561	— short-headed . . .	430
— short . . .	562	— silver-eyed . . .	431
— fasciated . . .	563	— coralline . . .	432
— spiral . . .	564	— Canada . . .	433
— black-backed . . .	566	— superb . . .	433
— dark-blue . . .	567	— aulic . . .	434
— cinereous . . .	567	— Boiquatrara . . .	435
— fishing . . .	568	— Malpalon . . .	436
— marsh . . .	570	— striated . . .	436
LANGAYA GENUS . . .	571	— Serenus . . .	437
Rattle-Snake, banded . . .	317	— ocellated . . .	438
— striped . . .	333	— Argus . . .	439
— wood . . .	335	— Chiametla . . .	440
— miliary . . .	336	— Java . . .	441
SIREN GENUS . . .	601	— Daboya . . .	442
Snake, horn-nose . . .	397	— Brazilian . . .	443
— crotaline . . .	400	— triangular-headed . . .	444
— Clotho . . .	401	— Panther . . .	445
— Lachesis . . .	402	— Leopard . . .	445
— Atropos . . .	404	— spotted . . .	446
— Alecto . . .	405	— ringed . . .	446
— Tisiphone . . .	406	— French . . .	449
— Megæra . . .	407	— dun . . .	450
— Spectacle . . .	409	— Æsculapian . . .	452
— Russelian . . .	418	— mourning . . .	453
— grass-green . . .	420	— large-scaled . . .	456
— severe . . .	421	— carinated . . .	457
— bull-headed . . .	422	— Molurus . . .	458
— crimson-sided . . .	423	— copper-bellied . . .	458
— hæmachate . . .	425	— cupreous . . .	459
— water-viper . . .	425	— Surinam . . .	460
— white . . .	427	— corn . . .	460
— milk-white . . .	427	— textile . . .	462
		— wampum . . .	463
		— black . . .	464

CONTENTS.

v

Snake, viper-headed . . .	465	Snake, white-skinned . . .	497
—— plicatile . . .	466	—— brown . . .	498
—— chain . . .	467	—— grey . . .	499
—— broad-nosed . . .	468	—— Cape . . .	499
—— fulvous . . .	469	—— angular . . .	500
—— short-tailed . . .	470	—— cærulean . . .	501
—— blue-green . . .	471	—— livid . . .	502
—— Lutrix . . .	472	—— red-bead . . .	502
—— graphic . . .	474	—— doubtful . . .	503
—— Cenchoa . . .	475	—— agile . . .	503
—— coachwhip . . .	476	—— flat-nosed . . .	504
—— clouded . . .	476	—— Padera . . .	505
—— ornamented . . .	477	—— Australasian . . .	505
—— Pintado . . .	478	—— cyanean . . .	506
—— miliary . . .	479	—— Sibon . . .	507
—— pearly . . .	480	—— dingy . . .	508
—— marbled . . .	480	—— Tyrian . . .	509
—— Ammobates . . .	481	—— Pelia . . .	509
—— crossed . . .	482	—— egg . . .	509
—— Peruvian . . .	483	—— swift . . .	510
—— Linnæan . . .	486	—— Hickanella . . .	511
—— glossy . . .	487	—— boaform . . .	511
—— Hygeian . . .	487	—— mucous . . .	513
—— Domicella . . .	488	—— cærulescent . . .	514
—— chequered . . .	489	—— smooth . . .	515
—— black-headed . . .	490	—— catenated . . .	516
—— annulated . . .	490	—— cinerebus . . .	517
—— Dipsas . . .	491	—— Hippocrepis . . .	518
—— necklace . . .	492	—— scutated . . .	518
—— ring-banded . . .	492	—— Minerva's . . .	519
—— Cobella . . .	493	—— Caspian . . .	520
—— rough . . .	494	—— domestic . . .	520
—— Algerine . . .	495	—— half-spotted . . .	521
—— Hannasch . . .	495	—— Caracara . . .	522
—— red-throated . . .	495	—— quill . . .	523
—— Sipedon . . .	496	—— Schockar . . .	524
—— spotted-sided . . .	497	—— Beatan . . .	524

Snake, Hoellick	525	Snake, Aurora	544
—— Jara	525	—— Iberacoa	544
—— Arnee	526	—— pale	545
—— sagittated	526	—— long-snouted	546
—— streaked	527	—— nasutus	548
—— fasciated	528	—— purpurascens	549
—— biped	528	—— iridescent	550
—— lineated	529	—— summer	551
—— Dart	530	—— filiform	551
—— Sibilant	530	—— black-tailed	552
—— Situla	532	—— collared	553
—— Saurite	532		
—— vittated	533	Viper, common	365
—— black-backed	534	—— black	375
—— Sirtal	535	—— American black	377
—— elegant	536	—— Ammodytes	379
—— tæniated	537	—— Charasian	379
—— bilineated	538	—— Redi's	380
—— bugle	539	—— Asp	381
—— trifasciated	542	—— Swedish	382
—— stolated	542	—— Greek	384
—— trilineated	543	—— Scythian	385
—— Bochr	543	—— Cerastes	385

ERRATA.—VOL. III. PART II.

P. 449, l. 1. for *punctato* read *punctatis*.P. 462, l. 1. for *dorsul* read *dorsali*.

Directions for placing the Plates in vol. III. part II.

The Vignette represents a species of Australasian Snake not yet fully described: it has the habit of a Boa, is covered with very small scales, and varied with irregular yellow spots on a blackish ground: length about 14 inches. See *White's Voyage*, p. 259. pl. 46.

Plate 87	to face page 314
88	317
89	333
90	334
91	335
92	339
93	340
94	344
95	346
96	347
97	348
98	350
99	353
100	355
101	365
102	377
103	385
104	397
105	402
106	403
107	409
108	418
109	422
110	423
111	425
112	452
113	453

Plate 114	to face page 454
115	455
116	458
117	458
118	460
119	461
120	463
121	465
122	483
123	556
124	558
125	564
126	566
127	571
128	573
129	575
130	576
131	582
132	583
133	588
134	591
135	593
136	595
137	596
138	601
139	608
140	612

AMPHIBIA.

ORDER

SERPENTES.

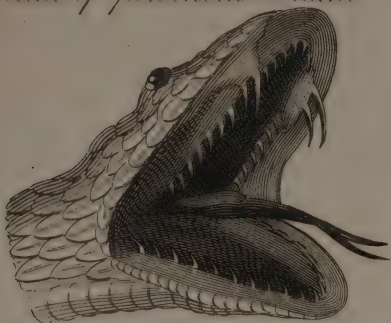
THESE animals are sufficiently distinguished from the preceding tribes of Amphibia by their total want of feet, moving by the assistance of their scales, and their general powers of contortion.

The distinction of species in this numerous tribe is often peculiarly difficult. Linnæus persuaded himself that an infallible criterion might be found in the number of scaly plates on the abdomen and beneath the tail; and, accordingly, attempted in the *Systema Naturæ* to discriminate the species by this mark alone: experience, however, has sufficiently shown that, though often highly useful in the investigation of these animals, it is yet by much too uncertain and variable to be permitted to stand as an established specific test; and it is to be lamented that Linnæus should have so little availed himself of other more ob-

vious characters. The colour is indeed often variable, but the pattern, or general distribution of markings in each species, appears to be more constant: the relative size of the head, the length of the body and tail, the size, smoothness, or roughness of the scales, as well as their shape in different parts of the animal, often afford pretty certain specific marks.

The distinction of Serpents into poisonous and innoxious can only be known by an accurate examination of their teeth; the fangs or poisoning teeth being always of a tubular structure, and calculated for the conveyance or injection of the poisonous fluid from a peculiar reservoir communicating with the fang on each side of the head: the fangs are always situated in the anterior and exterior part of the upper jaw, and are generally, but not always, of much larger size than the other teeth; they are also frequently accompanied by some smaller or subsidiary fangs, apparently destined to supply the principal ones when lost either by age or accident. The fangs are situated in a peculiar bone, so articulated with the rest of the jaw as to elevate or depress them at the pleasure of the animal: in a quiescent state they are recumbent, with their points directed inwards or backwards; but when the animal is inclined to use them as weapons of offence, their position is altered by the peculiar mechanism of the above-mentioned bone in which they are rooted, and they become almost perpendicular.

Head of poisonous Snake



of innoxious D.



87



Tail of Coluber



Carinated Scale



Plain Scale



Fang



Tail of Boa



HEAD of RATTLE-SNAKE.

A general rule for the determination of the existence or non-existence of these organs in any species of Serpent is proposed in a paper relative to the Amphibia by Dr. Gray, and published in the Philosophical Transactions for the year 1788. The fangs, according to Dr. Gray, may be distinguished with great ease, and, as he believes also, with great certainty, by the following simple method. When it is discovered that there is something like teeth in the anterior and exterior part of the upper jaw, which situation he considers as the only one in which venomous fangs are ever found, let a pin or other hard body be drawn from that part of the jaw to the angle of the mouth; (which operation may, for greater certainty, be tried on each side). If no more teeth be felt in that line, it may, he thinks, be fairly concluded that those first discovered are fangs, and that the serpent is consequently venomous: if, on the contrary, the teeth first discovered be observed not to stand alone, but to be only a part of a complete row, it may as certainly be concluded that the serpent is not venomous. This rule, however, like most others, may have its exceptions, and perhaps the most legitimate test of real fangs in a serpent is their tubular structure, which may always be easily detected by the assistance of a proper magnifier. It is to be observed, that all serpents, whether poisonous or not, have besides the teeth (whether fangs or simple teeth), in the sides of the upper jaw, two additional or interior rows, which are generally much smaller than the rest,

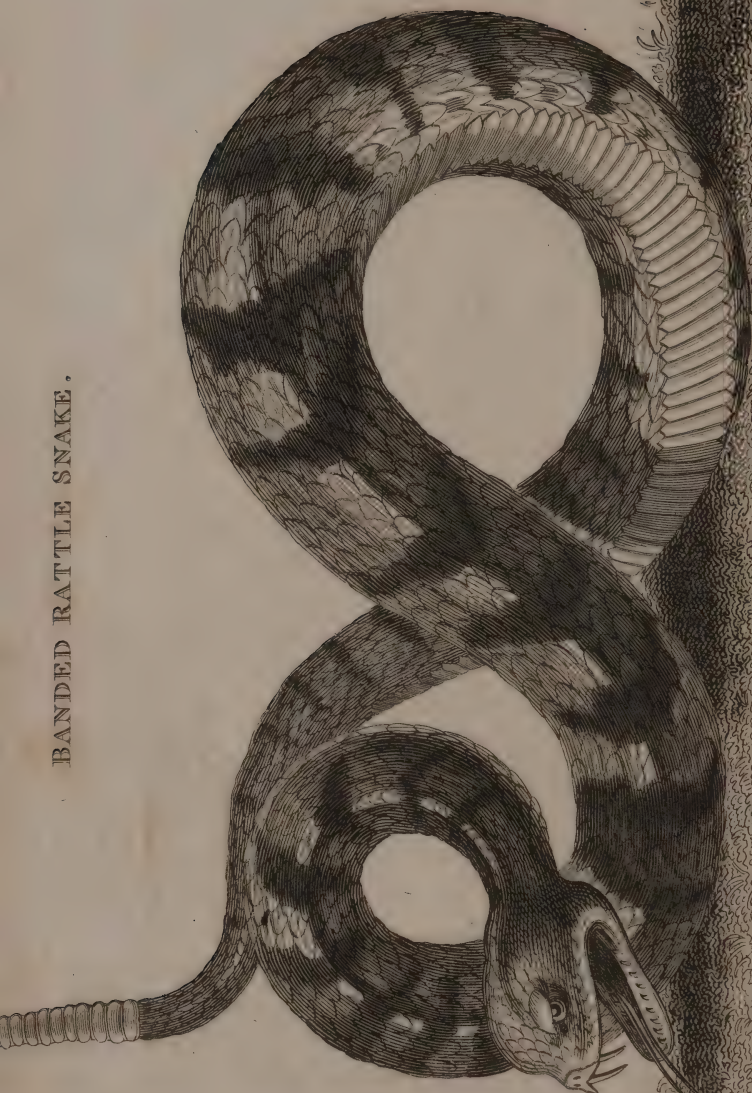
and frequently scarce visible: the general rule, therefore, is, that all venomous serpents have only two rows of true or proper teeth in the upper jaw, and that all others have four.

A head entirely covered with small scales is in some degree a character, but by no means a universal one, of poisonous serpents; as are also carinated scales on the head and body, or such as are furnished with a prominent middle line.

All Serpents are in the habit of casting their skin at certain periods; in temperate regions annually; in the warmer perhaps more frequently. The serpents of the temperate and cold climates also conceal themselves, during the winter, in cavities beneath the surface of the ground, or in any other convenient places of retirement, and pass the winter in a state more or less approaching, in the different species, to complete torpidity. It may be added, that some serpents are viviparous, as, the Rattle-Snake, the Viper, and many others of the poisonous kind, while the Common Snake, and probably the major part of the innoxious serpents, are oviparous, depositing their eggs in a kind of string or chain in any warm and close situation, where they are afterwards hatched.

The broad undivided laminæ or scaly plates on the bellies of Serpents are termed *scuta*, and the smaller or divided plates beneath the tail are called *squamæ subcaudales*, or subcaudal scales, and from these different kinds of laminæ the Linnæan genera of Serpents are chiefly instituted.

BANDED RATTLE SNAKE.



CROTALUS. RATTLE-SNAKE.

Generic Character.

<i>Scuta abdominalia.</i>		<i>Scuta</i> on the abdomen.
<i>Scuta Squamæque subcaudales.</i>		<i>Scuta</i> and <i>Squamæ</i> beneath the tail.
<i>Crepitaculum terminale caudæ.</i>		<i>Rattle</i> terminating the tail.

BANDED RATTLE-SNAKE.

Crotalus Horridus. *C. fusco-flavescens, fasciis transversis nigricantibus.*

Yellowish-brown Rattle-Snake, with blackish transverse bands.

Crotalus horridus. *Lin. Syst. Nat. p. 372.*

Vipera caudisona Americana. *Catesb. Car. 2. t. 41.*

Abdominal scuta 167, subcaudal 23.

THE genus *Crotalus*, or Rattle-Snake, affords the most signal examples of the powerfully destructive poison with which some of the serpent tribe are furnished; instances having frequently occurred in which the bite of these snakes has proved fatal to mankind in the space even of a very few minutes.

Till the discovery of the Western Hemisphere the knowledge of these serpents was concealed from the rest of the world, and philosophers then first beheld with amazement a reptile of the most

fatal nature, furnished, as if by a peculiar institution of Providence, with an instrument capable, in general, of warning mankind of their danger in too near an approach.

The different species of Rattle-Snakes seem to have been generally confounded with each other; and even Catesby, who travelled in those parts of North America where it is found, seems to have been unacquainted with one of the most remarkable species, and to have particularly described the Banded Rattle-Snake only, which he has also figured with sufficient clearness to prevent its being confounded with any other kind, though not with that minute attention to all the particulars which the more improved state of Natural History at present demands.

This species is found, in general, from three to four or five feet in length, and is of a yellowish brown colour, marked throughout its whole length with several transverse and somewhat irregular fasciæ of deep brown; and from the head to some distance down the neck run two or three longitudinal stripes of the same colour; the head is large, flat, and covered with small scales; the rest of the upper parts with moderately large oval ones, all strongly carinated or furnished with a prominent line down the middle: the under parts are of a dingy yellowish brown colour, marked here and there with numerous dusky variegations and freckles: at the extremity of the tail is situated the rattle, consisting of several hard, dry, horny processes, the peculiar structure of which will be

more amply described hereafter, and which, on the least disturbance or irritation, is elevated and shaken in such a manner as to cause a strong or brisk rattling sound.

“ The largest Rattle-Snake,” says Catesby, “ which I ever saw, was about eight feet in length, and weighing between eight and nine pounds. This monster was sliding into the house of Colonel Blake of Carolina, and had certainly taken up his abode there undisturbed, had not the domestic animals alarmed the family with their repeated outcries: the hogs*, dogs, and poultry, united in their hatred to him, shewing the greatest consternation, by erecting their bristles and feathers, and expressing their wrath and indignation, surrounded him, but carefully kept their distance; while he, regardless of their threats, glided slowly along.” “ It is not uncommon,” adds Mr. Catesby, “ to have them come into houses; a very extraordinary instance of which happened to myself in the same gentleman’s house, in the month of February, 1723; the servant in making the bed in a ground room (but few minutes after I left it) on turning down the sheets, discovered a rattle-snake coiled between the sheets in the middle of the bed.” “ They are the most inactive and slow moving snake,” adds this author, “ of all others, and are never the aggressors, ex-

* Hogs, however, are, in general, said to be so little afraid of the rattle-snake, that they prey on it occasionally with great eagerness; seizing it in such a manner as to prevent it from doing them any injury, and devouring it.

cept in what they prey upon ; for unless they are disturbed they will not bite, and when provoked they give warning by shaking their rattles. These are commonly believed to be the most deadly serpent of any in these parts of America. I believe they are so, as being generally the largest, and making a deeper wound, and injecting a greater quantity of poison. The most successful remedy the Indians seem to have, is to suck the wound, which in a slight bite has sometimes a good effect ; though the recovered person never fails of having annual pains* at the time they were bit. They have likewise some roots which they pretend will effect a cure, particularly a kind of *Asarum*, commonly called Heart-Snake-Root, a kind of *Chrysanthemum*, called *St. Anthony's Cross*, and some others : but that which they rely on the most, and which most of the Virginian and Carolina Indians carry dry in their pockets, is a small tuberous root, which they procure from the remote parts of the country. This they chew, and swallow the juice, applying some to the wound. Having, by travelling much with the Indians, had frequent opportunities of seeing the direful effects of the bites of these snakes, it always seemed and was apparent to me, that the good effect usually attributed to these their remedies, is owing more to the force of Nature, or the slowness of the bite of a small snake in a muscular part, &c.

* This may perhaps be considered as doubtful, or may depend on other circumstances than the bite of the Rattle-Snake.

The person thus bitten I have known to survive without any assistance for many hours ; but where a Rattle-Snake with full force penetrates with his deadly fangs, and pricks a vein or an artery, inevitable death ensues, and that, as I have often seen, in less than two minutes. The Indians know their destiny the minute they are bit, and when they perceive it mortal, apply no remedy ; concluding all efforts in vain : if the bite happeneth in a fleshy part, they immediately cut it, to stop the current of the poison."

" The colour of the head of this Rattle-Snake is brown, the eye red, the upper part of the body of a brownish yellow, transversly marked with irregular broad black lists. The rattle is usually of a brown colour, composed of several horny membranous cells, of an undulated pyramidal figure, which are articulated one within another, so that the point of the first cell reaches as far as the basis or protuberant ring of the third, and so on ; which articulation being very loose, gives liberty to the parts of the cells that are inclosed within the outward rings, to strike against the sides of them, and so to cause the rattling noise which is heard when the snake shakes its tail."

" The charming, as it is commonly called, or attractive power this snake is said to have, of drawing to it small animals, and devouring them, is generally believed in America ; as for my own part I never saw the action, but a great many from whom I had it related, all agree in the manner of the process ; which is, that the animals,

particularly birds and squirrels (which principally are their prey), no sooner spy the snake, than they skip from spray to spray, hovering and approaching gradually nearer to their enemy, regardless of any other danger; but with distracted gestures and outcries, descend, though from the top of the loftiest trees, to the mouth of the snake, who openeth his jaws, takes them in, and in an instant swallows them."

On this subject Dr. Mead, in his work on poisons, expresses himself as follows:

"With respect to the use of the Rattle, a vulgar error has obtained, even among the learned, about it. It is commonly said that it is a kind contrivance of divine Providence, to give warning to passengers by the noise which this part makes when the creature moves, to keep out of the way of its mischief. Now this is a mistake. It is beyond all dispute that wisdom and goodness shine forth in all the works of the Creation; but the contrivance here is of another kind than is imagined. All the parts of animals are made either for the preservation of the individual, or for the propagation of its species: this before us is for the service of the individual. This snake lives chiefly upon squirrels and birds, which a reptile can never catch without the advantage of some management to bring them within its reach. The way is this. The Snake creeps to the foot of a tree, and, by shaking his rattle, awakens the little creatures which are lodged in it. They are so frightened at the sight of their enemy, who fixes his

lively piercing eyes upon one or other of them, that they have no power to get away, but leap about, from bough to bough, till they are quite tired, and at last, falling to the ground, they are snapped into his mouth. This is by the people of the country called *charming* the squirrels and birds."

Dr. Barton, professor of natural history in the University of Pennsylvania, in a memoir on the supposed fascinating power of the Rattle-Snake, imagines the whole to be no more than the fluttering of old birds in defence of their young, and which are themselves occasionally caught by the Rattle-Snake in consequence of too near an approach.

"Of the fascinating power of the Rattle-Snake," says Mr. Pennant*, "it is difficult to speak: authors of credit describe the effects. Birds have been seen to drop into its mouth, squirrels descend from their trees, and leverets run into its jaws. Terror and amazement seem to lay hold on these little animals: they make violent efforts to get away, still keeping their eyes fixed on those of the snake; at length, wearied with their movements, and frightened out of all capacity of knowing the course they ought to take, become at length the prey of the expecting devourer; probably in their last convulsive motion." The same author observes, that Rattle-Snakes in general swarm in the less inhabited parts of North America; but are now almost ex-

* Arct. Zool. suppl. 88.

tirpated in the more populous parts. None are found farther north than the mountains near lake *Champlain*; but infest South America, even as far as Brasil. They love woods and lofty hills, especially where the strata are rocky or chalky: the pass near *Niagara* abounds with them. Being slow of motion, they frequent the sides of rills, to make prey of frogs, or such animals as resort there to quench their thirst: are generally found during summer in pairs; in winter collecting in multitudes, and retiring under ground, beyond the reach of frost: tempted by the warmth of a spring day, they are often observed to creep out weak and languid: a person has seen a piece of ground covered with them, and killed with a rod between sixty and seventy; till overpowered with the stench, he was obliged to retire*.

The Rattle-Snake is a viviparous animal; producing its young in the month of June, generally about twelve in number; and which by September acquire the length of twelve inches. It is said to practise the same extraordinary mode of preserving its young from danger which is attributed to the Viper in Europe, viz. of receiving them into its mouth and swallowing them. Of this we have the attestation of M. de Beauvois †, who declares himself an eye-witness of the process. This gentleman saw a large Rattle-Snake, which he happened to disturb in his walks, and which immediately coiled itself up, opened its jaws, and

* Arct. Zool. suppl. p. 88. † American Phil. Trans. vol. iv.

instantly five small ones, which were lying by it, rushed into its mouth. The author retired and watched the snake, and in a quarter of an hour saw her again discharge them. He then approached it a second time, when the young retired into its mouth with greater celerity than before, and the snake immediately moved off among the grass and escaped. This happened at a place called *Pine-Log*, where M. de Beauvois staid some time with the Indians during an illness with which he was seized. M. de Beauvois adds, that in winter the Rattle-Snake retires into deep mossy loose soils beneath trees, &c. as well as in holes under ground.

From experiments made in Carolina by Captain Hall, and related in the Philosophical Transactions, it appears that a Rattle-Snake of about four feet long, being fastened to a stake fixed in the ground, bit three dogs, the first of which died in less than a quarter of a minute: the second, which was bitten a short time afterwards, in about two hours, in convulsions; and the third, which was bitten about half an hour afterwards, shewed the visible effects of the poison in about three hours, and died likewise. Four days after this, another dog was bitten, which died in half a minute, and then another, which died in four minutes. A cat which was bitten was found dead the next day. Eight days after this a frog was bitten, which died in two minutes, and a chicken of three months old in three minutes. The experiments having been discontinued some time for

want of subjects, a common black snake was procured, which was healthy and vigorous, and about three feet long. It was brought to the Rattle-Snake, when they bit each other, the black snake biting the Rattle-Snake so as to make it bleed. They were then separated, and in less than eight minutes the black snake died; while the Rattle-Snake, on the contrary, shewed no signs of indisposition, appearing as well as before. Lastly, in order to try whether the Rattle-Snake could poison itself, it was provoked to bite itself. The experiment succeeded, and the animal expired in less than twelve minutes.

According to experiments made by Mr. Vosmaer at the Hague, with a lively young Rattle-Snake which he received from Surinam, small birds, such as Sparrows, Greenfinches, &c. died sometimes in four, sometimes in ten, and sometimes in twenty minutes after having been bitten, and a mouse in a minute and half.

The anatomy of the Rattle-Snake is detailed with much exactness by Dr. Tyson in the *Philosophical Transactions*; and it appears that its internal structure in almost all respects resembles that of the Viper. The chief particulars are the following:

The wind-pipe, as in the Viper, as soon as it enters the lungs, consists of semi-annular cartilages, which, being joined at both ends to the membrane of the lungs, constitute a free or open channel, thus immediately transmitting the air to the vesicles of those organs, which are of very

great length, beginning near the throat, and running down three feet in length: the upper part of them, for the distance of about a foot from their origin, is composed of small vesiculæ or cells, as in the lungs of a Frog; and which, from the frequent branchings of the blood-vessels, appear of a florid red: this part tapers, proportionally to the body: the lowest part of it, near the heart, being moderately blown, is about five inches and a half in circumference: a little lower, for the space of about four inches, the cells gradually disappear, so that they seem at last to form only a reticular compages of *valvulæ conniventes* on the inside of the membrane of the lungs: the greatest circumference here is about six inches: the remaining part of the organ is merely a large bladder, without any cellular subdivisions, and consists of a strong, transparent membrane, the circumference of which, when inflated, is about eight inches and a half. The lungs in the Water-Newt, and some other animals, are divided into two large lobes or simple bladders, without cellular subdivisions; in the frog, crocodile, &c. of two large lobes with cellular subdivisions; while in the Rattle-Snake, Viper, &c. both these kinds of structure are comprised; the fore part of the organ being filled with numerous internal vesicular subdivisions, while the remaining part is a mere lengthened bladder.

The œsophagus or gullet was two feet three inches in length, and marked by two distinct swellings or enlargements of very great size, so

as to represent two preparatory stomachs, as it were; nor was the real or proper stomach capable of so much distension as these: the length of the true stomach or third enlargement was nearly similar to that of the second enlargement of the œsophagus; it was much thicker than that part, and resembled in its fabric that of the Viper. From the pylorus the duct straitened again for about half an inch, and then formed a large intestine, the weaved rugæ of its internal coat presenting a curious and pleasing spectacle: this intestine, after some small windings, terminated in the rectum, which was of much smaller diameter. “In the promiscuous food which serpents take in (adds Dr. Tyson), which they always swallow whole, and in which there are always some parts unfit for digestion, and which must, therefore, be returned, the œsophagus here being very long, Nature has provided the above-mentioned swellings or enlargements of that part, where they may be respited, during the efforts made use of by the animal for that purpose, till collecting its force, it gives them, as it were, another and another lift, and at length ejects them; and if what is confidently affirmed be true, that, on occasion of danger, they receive their young into their mouths, these are fit places for receiving them.”

The heart was placed near the bottom or base of the trachea, on the right side of it: its length was an inch and a half, and its figure rather flat than round; encompassed with a pericardium;

the auricle being larger than the heart itself. It had only one ventricle, the valves being small and fleshy, and the inside of the ventricle distinguished by four or five cross furrows.

A little below the heart lay the liver, which was about an inch wide in the largest place, and seemed divided on one side by the vena cava into two lobes of unequal length; that on the left side being about ten inches, and that on the right a foot long. Its colour was a brown red, and its use, no doubt, the secreting of the gall, which was contained in a bladder, seated at some distance below it.

The fat in this animal was very plentiful, and the membrane to which it adhered seemed to be the omentum, which encompassed all the parts contained in the lower belly, and was joined to both sides of the ribs, running from thence to the rectum, and forming a bag which enveloped the parts there, but was free, and not conjoined towards the belly: there was no diaphragm or separation between the heart and lungs and the abdominal viscera.

The kidneys, which lay towards the back, on each side of the spine, were not very firmly conjoined, and were about seven inches in length; that on the right side somewhat exceeding that of the left: each were about an inch in diameter, and though forming one continued body, yet plainly distinguishable into several smaller kidneys, to the number of fifteen; all so curiously contrived, with such an elegant compages of

blood-vessels and tubes, as to compose so many regularly-formed bodies, which could not be viewed without admiration.

The tongue was in all respects like that of a Viper, being composed of two long and round bodies, contiguous, and joined together from the root to half its length: this part may be darted out or retracted with great agility by the animal, the part which is thrown out being of a black colour, while the remainder or sheathed portion is red.

The teeth are of two sorts, viz. the smaller, which are seated in each jaw, and serve for the catching and retaining the food; and, secondly, the fangs or poisonous teeth, which kill the prey, and are placed without the upper jaw, and are all canini or apprehensores; for since snakes do not chew or bruise their food, but swallow it whole, they have no need of molares or grinders.

Of the first sort of teeth are two rows on each side, viz. five in a row, the inward less than the outward, there being twenty in all. In the upper jaw there are only sixteen, viz. five on each side, placed backward, and six before. These do no harm, which was known of old to mountebanks, who, to give a proof of the efficacy of their antidotes, would suffer themselves to be bitten by Vipers, but first took care to spoil them of their fangs.

The fangs are placed without the upper jaws, towards the fore part of the mouth, not fastened to the maxillæ, as the other teeth, but the two

outmost and largest fangs were fixed to that bone which (if any) may be thought to be the ear-bone: the other fangs, or smaller ones, seemed not fixed to any bone, but rather to muscles and tendons. The fangs were not to be perceived on first opening the mouth, lying couched under a strong membrane or sheath; but so as to make a large rising there on the outside of the smaller teeth of the maxilla; but at pleasure, when alive, the animal can raise them to do execution with, as a cat or lion does its claws. These fangs were hooked and bent, like the tusks of the Babyroussa, but some of the smaller ones were bent at right angles: on each side we meet with about six or seven of these. In all these teeth was a pretty large foramen or hole towards the root of it, and towards the point was a plainly visible large slit, sloping like the cut of a pen; the part from the slit being perfectly hollow; and on pressing gently with the finger on the side of the gum, the poison, which was of a yellowish colour, was readily perceived to issue from the hollow of the tooth through the slit.

The vertebræ, according to the figure of the body, were smallest towards both extremes, and largest in the middle. From the neck to the vent there were as many vertebræ as scales on the belly, viz. 168; but from the vent to the setting on of the rattle were twenty-nine more in number than the scales.

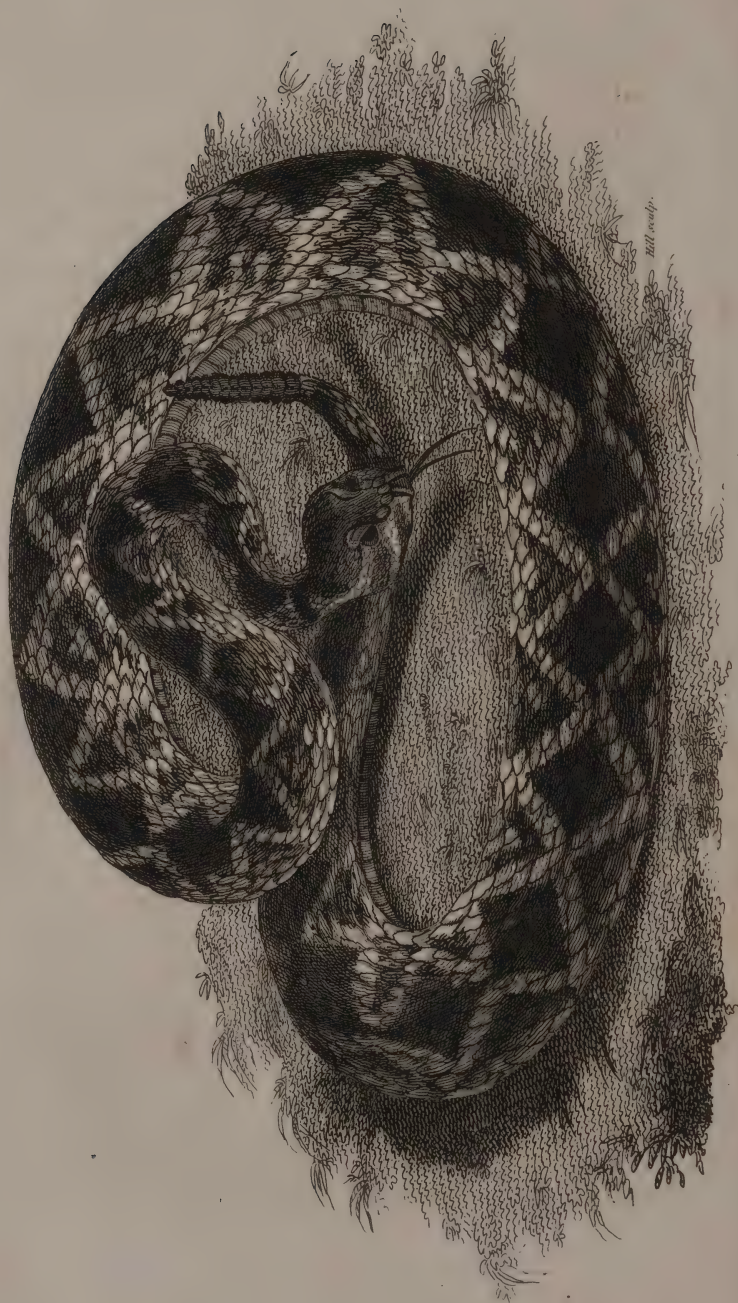
The rattle is well described by Dr. Grew, who

observes that it consists of hollow, hard, dry, and semitransparent bones, nearly of the same size and figure; resembling in some degree the shape of the human os sacrum; for although only the last or terminal one seems to have a rigid epiphysis joined to it, yet have every one of them the like; so that the tip of every uppermost bone runs within two of the bones below it; by which artifice they have not only a moveable coherence, but also make a more multiplied sound: each bone hitting against two others at the same time.

The rattle is placed with the broad part perpendicular to the body, and not horizontal; and the first joint is fastened to the last vertebra of the tail by means of a thick muscle under it, as well as by the membranes which unite it to the skin: all the remaining joints are so many extraneous bodies, as it were, or perfectly unconnected to the tail by any other means than their curious insertions into each other.

The number of joints in the rattle of different individuals is very various, from five to twelve, fifteen, twenty, or even, according to some accounts, as many as forty. The pieces of which it consists are successively formed, each having been once attached to the muscle of the last vertebra of the tail, and driven on by the gradual formation of a young or immature one beneath it; but as it is not known whether these successive formations of new joints in the rattle correspond with the general changes of the skin, and as the

STRIPED RATTLE-SNAKE.



part is also liable from its nature to occasional mutilations, it cannot be considered as a proper test of the animal's age.

The length of the individual dissected by Dr. Tyson, was four feet five inches; the girth of the body in the largest part six inches and a half; that of the neck three inches, and of the extremity of the tail, near the rattle, two inches.

From his description of its colour, it should rather seem to have been the *Crotalus Durissus* or next species, than the present, since he tells us the scales on the back made a curious chequer or dappling by the intermixture of its colours. The number of abdominal scuta was 168. Beyond the vent were two half-scales, and thence nineteen scuta or whole scales; while from thence to the rattle itself were six orders or rows of smaller scales.

STRIPED RATTLE-SNAKE.

Crotalus Durissus. C. fuscus, striis rhombeatis subflavis.

Brown Rattle-Snake, with yellowish rhomboid stripes.

Crotalus Durissus. Lin. Syst. Nat. p. 372.

Abdominal scuta 172, subcaudal 21.

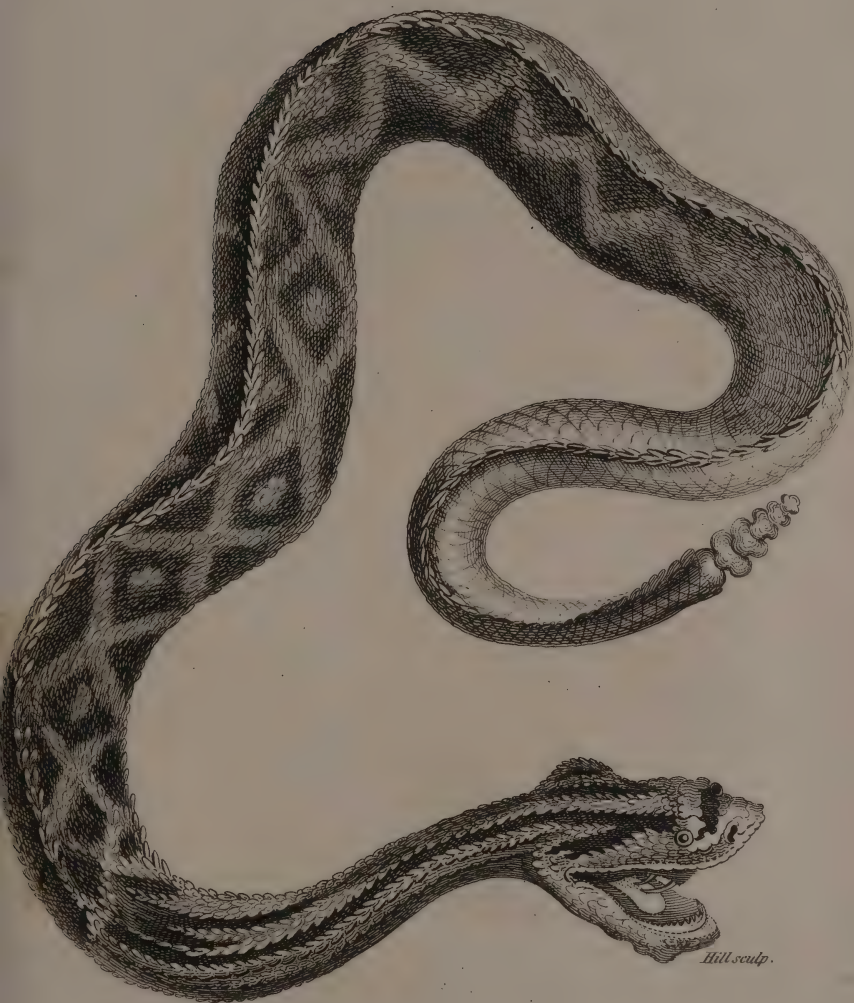
THIS species may, in general, be readily distinguished from the former by the different disposition of its colours, being of a deep brown above, with a very regularly conducted pattern of pale-yellow streaks, so disposed as to form a continued series of large rhombs or lozenges down the back,

the stripes growing somewhat less distinct as they descend on the sides, where they are continued into a less perfect repetition of the dorsal pattern: the neck is marked by a longitudinal streak on each side, and the under parts of the body resemble in colour those of the former species, being of a dusky yellowish brown, with numerous small dark spots and patches. The size and general proportions of the animal resemble those of the former, with which indeed it appears to have been very frequently confounded. It is also a native of the same parts of America, but seems to have been unknown to Catesby, who has not introduced it into his History of Carolina. Its bite, so far as can be ascertained by experiments made with such specimens as have been transported into Europe, appears to be equally fatal* with that of the former species.

* In the spring of the present year a Rattle-Snake of this species, which had been kept many months in confinement, bit a healthy half-grown Rabbet, which was placed in its cage, on the loins: the Rabbet instantly fell down; became quite paralytic in the hind limbs, and soon afterwards in the fore also, and died in the space of twenty-five minutes† from the bite, without any convulsive motions.

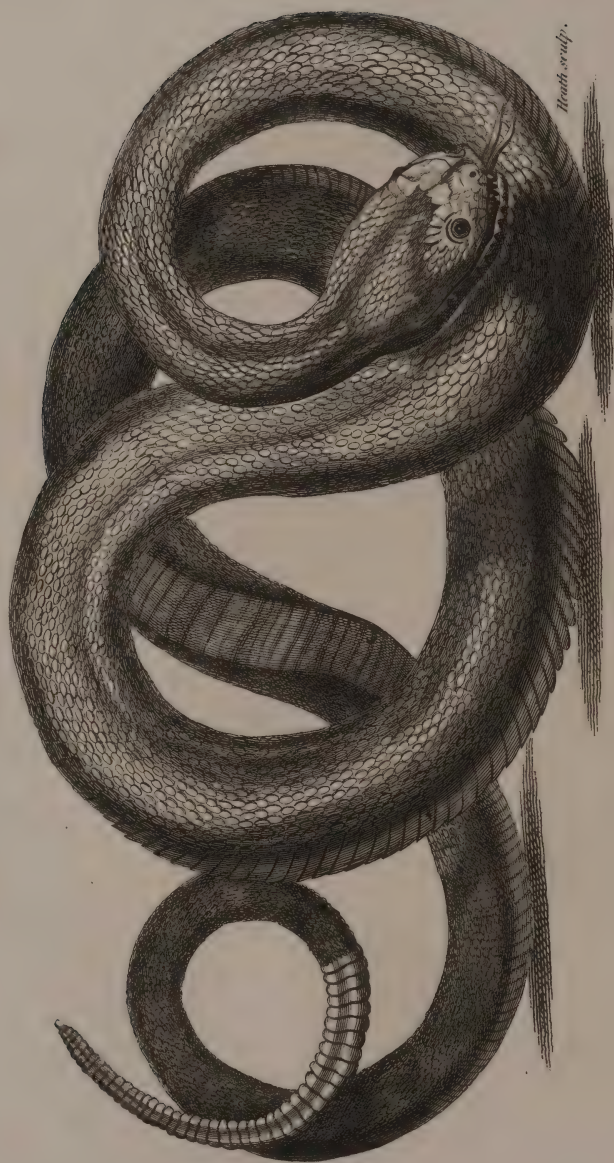
† According to the observations of Sir Thomas Cullum, bart. in whose presence the experiment was made.

STRIPED RATTLE-SNAKE.
var ?



from Vosmaer.

WOOD RATTLE-SNAKE.



Heath sculp.

WOOD RATTLE-SNAKE.

Crotalus Dryinas. C. griseus, subluleo variatus.

Greyish Rattle-Snake, with yellowish variegations.

Crotalus Dryinas. Lin. Syst. Nat. p. 372.

Vipera caudisona Ceilanica. Seb. 2. t. 95. f. 3.

Vipera Orientalis maxima caudisona. Seb. 2. t. 96. f. 1.

Abdominal scuta 165, subcaudal 30.

A GENUINE description of the particular colour of this species, in a living state, seems yet wanting; authors having described it from specimens preserved in spirits, in which, after a certain period, the colours of most serpents are greatly changed and faded. It is said, however, to be of a paler or lighter tinge than the two former species, and to be variegated with yellowish marks on the back: some individuals figured by Seba, and which are generally referred to this animal, are of a rufous or ferruginous tinge, with a cast of yellow accompanied by a few dusky variegations on the upper parts: the rattle is, in these specimens, of much greater length than is usually seen in the preceding kinds, the number in one of them amounting to no less than forty. Seba imagined his specimens to have been natives of Ceylon, and therefore distinguishes them by the title of Oriental Rattle-Snakes; but it is generally supposed that this is a mistaken idea, and that the whole genus is confined to the American continent.

MILIARY RATTLE-SNAKE.

Crotalus Miliarius. *C. cinereus*, *maculis nigris triplici ordine longitudinali, macula rubra inter singulas dorsales.*

Grey Rattle-Snake, with a triple row of black spots, and a red spot between each of the dorsal ones.

Crotalus Miliarius. *Lin. Syst. Nat. p. 572.*

Small Rattle-Snake. *Catesb. Car. 2. pl. 42.*

Abdominal scuta 132, subcaudal 32.

MR. CATESBY, the first describer of this animal, seems to entertain some doubts whether it really differs from the common rattle-snake, in any other respect than in colour, its prevailing tinge being grey-brown, shaded on the back with red, and marked by large black spots with white indented edges. It appears, however, to be a truly distinct species, differing not only in colour but in the smaller number of its abdominal scuta: there are generally three rows of black dorsal spots, of which the middle range is the largest, and is distinguished by a red spot interposed between each of the black ones, which are also commonly tinged with red on the middle: this is the smallest species of Rattle-Snake yet known, rarely exceeding the length of two feet. In its general habits it resembles the preceding kinds.

BOA. BOA.

Generic Character.

<p><i>Scuta</i> abdominalia & sub-caudalia.</p>	<div style="border-left: 1px solid black; border-right: 1px solid black; height: 100px; margin: 0 auto;"></div>	<p><i>Scuta</i> or undivided plates both on the abdomen and beneath the tail.</p>
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CONSTRUCTOR BOA.

Boa Constrictor. *B. griseo-flavescens, catena dorsali castanea, maculis lateralibus subtrigonis.*

Yellowish-grey Boa, with large chesnut-coloured chain-like pattern down the back, and subtrigonal spots on the sides.

Boa Constrictor. *Lin. Syst. Nat. p. 373.*

Serpens Ceilonica spadicea Manballa dicta. *Seb. 2. t. 99. f. 1.*

Serpens excellens ac speciosa Brasiliensis. *Ib. t. 99. f. 2.*

Serpens blanda Ceilonica Polonga dicta. *Ib. t. 101.*

Serpens Americana arborea. *Seb. 1. t. 53.*

Le Devin. *Cepede ovip. 2. p. 338.*

Boa Constrictor. Great Boa. *Nat. Misc. vol. 2. pl. 51.*

Abdominal scuta 240, subcaudal 60.

THE genus Boa is remarkable for the vast and almost unlimited size of some of the principal species, which in India, Africa, and South America, are occasionally found of not less than twenty, thirty, and even thirty-five feet in length, and of a strength so prodigious as to be able to destroy

cattle, deer, &c. by twisting around them in such a manner as to crush them to death by continued pressure*, after which they swallow them in a very gradual manner; and when thus gorged with their prey, become almost torpid with repletion, and if discovered in this state, may without much difficulty be destroyed by shooting or other methods. There is reason to suppose that these gigantic serpents are become less common now than some centuries backwards, and that in proportion as cultivation and population have increased, the larger species of noxious animals have been ex-

* This practice of the larger serpents seems to have been well known to the ancients: thus Lucan, speaking of the monstrous African snakes (which he also represents as furnished with wings), tells us they destroy Oxen, and even Elephants, by writhing around and crushing them to death.

*" Vos quoque, qui cunctis innoxia numina terris
Serpitis, aurato nitidi fulgore Dracones,
Pestiferos ardens facit Africa, ducitis altum
Aera cum pennis, armentaue tota secuti
Rumpitis ingentes amplexi verbere tauros.
Nec tutus spatium est Elephas: datis omnia leto:
Nec vobis opus est ad noxia fata veneno."*

Ye too, in other climes who harmless rove
In gilded scales, the guardians of the grove,
In horrid Afric's pestilential air
Acquire new natures from the burning glare:
Ride thro' the blaze of noon on sable wing,
Quick on th' affrighted herds with fury spring;
And gathering all your folds in writhings dire,
Bid the huge Ox beneath your crush expire:
Th' enormous Elephant by force can slay,
And need no poison to secure your prey.

The tale of Laocoon in Virgil might be also adduced as an example of this particular.



Hill sculp.

CONSTRUCTOR BOA.

pelled from the haunts of mankind, and driven into more distant and uncultivated tracts: they are still, however, occasionally seen, and sometimes approach the plantations and gardens of the districts nearest to their residence.

Of all the larger Boæ the most conspicuous is the Boa Constrictor, which is at once preeminent from superiority of size and beauty of colours: in this respect indeed it appears to be subject to considerable variation from age, sex, and climate, but may be distinguished in every state from the rest of its tribe by the peculiar pattern or disposition of its variegations. The ground-colour of the whole animal, in the younger specimens, is a yellowish grey, and some times even a bright yellow, on which is disposed along the whole length of the back a series of large, chain-like, reddish-brown, and sometimes perfectly red variegations, leaving large open oval spaces of the ground colour at regular intervals: the largest or principal marks composing the chain-like pattern above mentioned are of a squarish form, accompanied on their exterior sides by large triangular spots, with their points directed downwards: between these larger marks are disposed many smaller ones of uncertain forms, and more or less numerous in different parts: the ground-colour itself is also scattered over by a great many small specks of the same colour with the variegations: the exterior edges of all the larger spots and markings are commonly blackish, or of a much deeper cast than the middle part, and the ground-colour immediately accompany-

ing the outward edges of the spots is, on the contrary, lighter than on other parts, or even whitish, thus constituting a general richness of pattern, of which nothing but an actual view of a highly-coloured specimen of the animal itself can convey a complete idea. In the larger specimens the yellow tinge is often lost in an uniform grey cast, and the red tinge of the variegations sinks into a deep chesnut; and in some the general regularity of the pattern before described is disturbed by a kind of confluent appearance: the head is always marked above by a large longitudinal dark band, and by a narrower lateral band passing across the eyes towards the neck.

The Boa Constrictor is a native of Africa, India, the larger Indian islands, and South America, where it chiefly resides in the most retired situations in woody and marshy regions.

It was, in all probability, an enormous specimen of this very serpent that once diffused so violent a terror amongst the most valiant of mankind, and threw a whole Roman army into dismay. Historians relate this surprising event in terms of considerable luxuriance. Valerius Maximus thus mentions it from Livy, in one of the lost books of whose history it was related more at large.

“ And since we are on the subject of uncommon phænomena, we may here mention the serpent so eloquently and accurately recorded by Livy; who says, that near the river Bagrada in Africa, a snake was seen of so enormous a magni-

tude as to prevent the army of Attilius Regulus from the use of the river; and after snatching up several soldiers with its enormous mouth, and devouring them, and killing several more by striking and squeezing them with the spires of its tail, was at length destroyed by assailing it with all the force of military engines and showers of stones, after it had withstood the attack of their spears and darts: that it was regarded by the whole army as a more formidable enemy than even Carthage itself; and that the whole adjacent region being tainted with the pestilential effluvia proceeding from its remains, and the waters with its blood, the Roman army was obliged to remove its station: he also adds, that the skin of the monster, measuring 120 feet in length, was sent to Rome as a trophy."

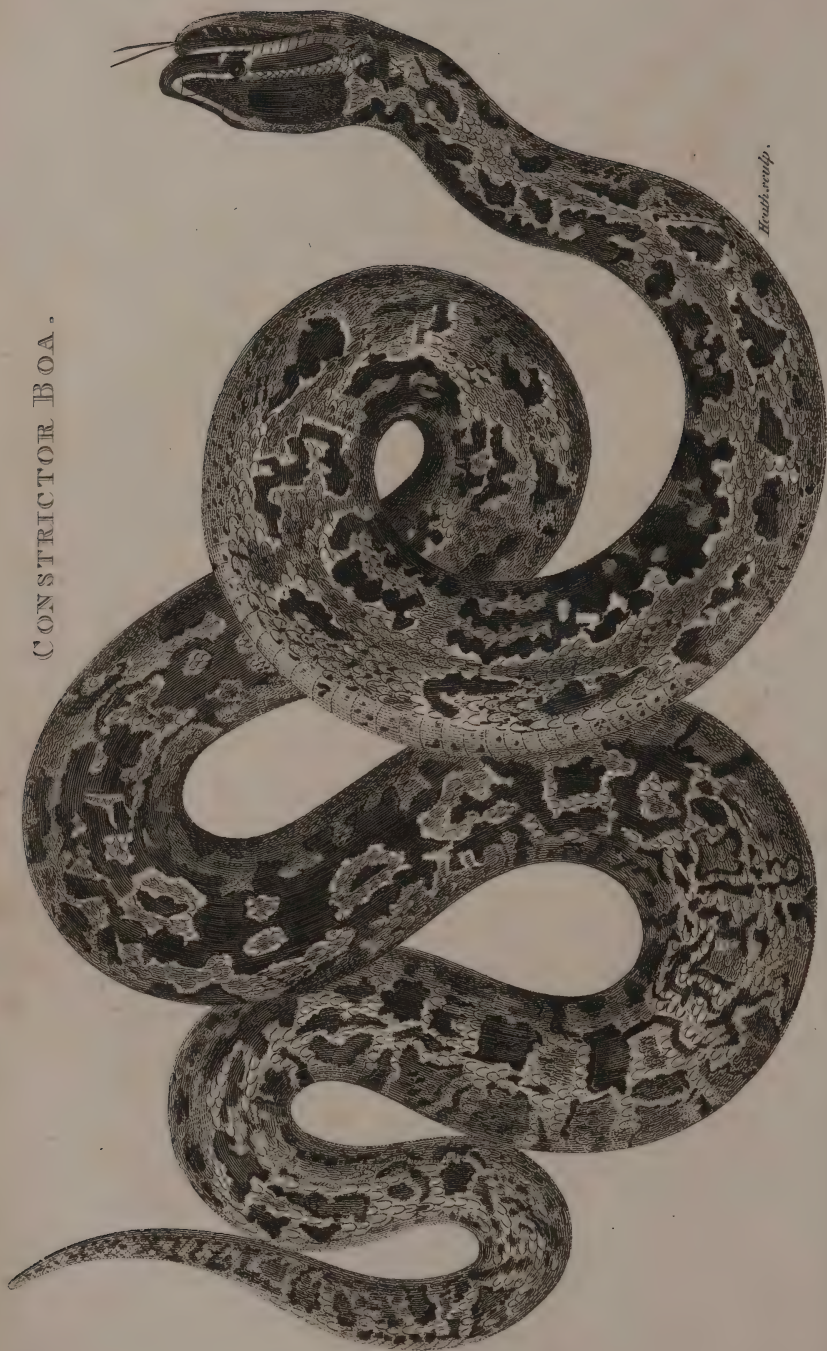
The learned Frienshemius, in his *Supplementa Liviana*, has attempted a more ample and circumstantial narrative of the same event, and it cannot be unacceptable to the reader to receive a quotation from an author who has so happily imitated the manner of the great historian.

"Interea M. Regulus, &c."

"In the mean time Regulus, every where victorious, led his army into a region watered by the river Bagrada, near which an unlooked-for misfortune awaited them, and at once affected the Roman camp with considerable loss, and with apprehensions still more terrible; for a serpent of prodigious size attacked the soldiers who were sent for water, and while they were overwhelmed

with terror, and unequal to the conflict, engulfed several of them in its enormous mouth, and killed others by writhing round them with its spires, and bruising them with the strokes of its tail: and some were even destroyed by the pestilential effluvia proceeding from its breath: it caused so much trouble to Regulus, that he found it necessary to contest the possession of the river with it by employing the whole force of his army; during which a considerable number of soldiers were lost, while the serpent could neither be vanquished nor wounded; the strong armour of its scales easily repelling the force of all the weapons that were directed against it; upon which recourse was had to battering engines, with which the animal was attacked in the manner of a fortified tower, and was thus at length overpowered. Several discharges were made against it without success, till its back being broken by an immense stone, the formidable monster began to lose its powers, and was yet with difficulty destroyed; after having diffused such a horror among the army, that they confessed they would rather attack Carthage itself than such another monster: nor could the camp continue any longer in the same station, but was obliged to fly; the water and the whole adjacent region being tainted with the pestiferous effluvia. A most mortifying humiliation to human pride! Here at least was an instance of a whole Roman army, under the command of Regulus, and universally victorious both by sea and land, opposed by a single snake, which

CONSTRUCTOR BOA.



Boa constrictor.

from Jan. 2. London. Published by G. Hensley Fleet Street.

conflicted with it when living, and even when dead obliged it to depart. The proconsul, therefore, thought it no diminution to his dignity to send the spoils of such an enemy to Rome, and to confess at once the greatness of his victory and his terror by this public memorial: for he caused the skin of the snake to be taken off and sent to the city; which is said to have measured 120 feet: it was suspended in a temple, and remained till the time of the Numantine war."

Of the two figures selected for the illustration of this species, one represents the animal in its most regular state of variegation, the other with the less regular or confluent pattern.

SPOTTED BOA.

Boa Scytale. *B. cinerea maculis dorsalibus magnis orbiculatis nigris, lateralibus annulatis disco albo.*

Cinereous Boa, with large orbicular black dorsal spots, and annulated lateral ones, with white centres.

Boa Scytale. *Lin. Syst. Nat. p. 274. Boddaert Nov. Act. Cæs. 7. p. 17. Scheuchtzer Phys. Sacr. t. 737. f. 1.*

Abdominal scuta 250, subcaudal 70.

THE spotted Boa is sometimes scarcely inferior in size to the Constrictor, and is of similar manners, destroying, like that animal, goats, sheep, deer, &c. it is described as being generally of a grey or glaucous colour, marked with large orbicular black spots on the back, and with smaller

ones of similar form, but with white centres, on the sides, while on the abdomen are scattered several oblong spots and marks, interspersed with smaller specks and variegations. It is a native of several parts of South America, and, like other large snakes, is occasionally eaten by the Indians.

RINGED BOA.

Boa Cenchris. *B. rufescens, annulis magnis dorsalibus nigricantibus, maculis reniformibus lateralibus fuscis medio albidis.*

Rufescent Boa, with large dusky dorsal rings, and blackish kidney-shaped lateral spots with white centres.

Boa Cenchris. *Lin. Syst. Nat. p. 274.*

Tamacuilla Huilia, seu Serpens Oculea Mexicana fœmina.
Seb. 2. t. 98.

Abdominal scuta 265, subcaudal scuta 57.

THIS also grows to a large size, though not equal to either of the former species, from which, as well as from most others, it may be easily distinguished by the regular distribution of its colours; the general cast being ferruginous, darkest on the back, where it is marked by a continued series of very large blackish circles from head to tail; while along the sides are interspersed several kidney-shaped blackish spots with white centres: the head is a lengthened form, and is marked by a black longitudinal and two lateral bands. This animal is a native of South America, and is extremely well figured in the work of Seba. In the British and Leverian Museums are specimens preserved in spirits.

WATER BOA

Boa Enydri. *B. colore griseo variegata.* Boddaert Nov. Act.
Cæs. 7. p. 18.

Boa with grey variegations.

Boa Enydri. *Lin. Syst. Nat. p. 274.*

Abdominal scuta 270, subcaudal 105.

THIS species, according to Linnæus, is variegated with different shades of grey; the teeth in the lower jaw are longer than usual in this genus; the number of abdominal scuta is 270, and of the subcaudal ones 105. Linnæus described it from a specimen in the collection of Baron Degeer. It is greatly allied in general appearance to the *Hor-
tulana*, having a compressed body, and a nearly similar pattern.

 BROWN BOA.

Boa Ophryas. *B. corpore fusco.*

Boa with brown body.

Boa Ophryas. *Lin. Syst. Nat. p. 274.*

Abdominal scuta 281, subcauda 84.

MENTIONED by Linnæus from a specimen in the Museum of Degeer: has the general habit of the *B. Constrictor*, but is of a dark or dusky colour, and has 281 abdominal and 84 subcaudal scuta.

CANINE BOA.

Boa Canina. *B. viridis, fasciis dorsalibus transversis undulatis albis.*

Green Boa, with transverse, undulated, white dorsal bands.

Boa Canina. *Lin. Syst. Nat. p. 373. Mus. Ad. Frid. p. 39. t. 3.*

Serpens *Bojobi Brasiliensis*, &c. *Seb. 2. t. 96. and var. Serpens*

Bojobi Ceilanica. t. 81.

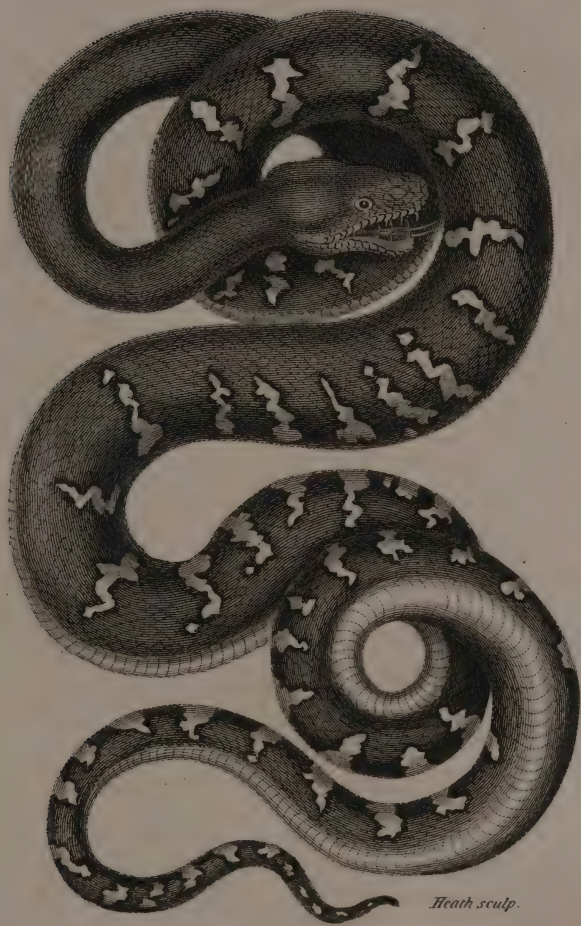
Abdominal scuta 203, subcaudal 77.

A HIGHLY beautiful snake; measuring about four feet in length, and being of moderate size or thickness in proportion: the head is large, and shaped like that of a dog: the colour of the whole animal on the upper parts is a most beautiful saxon-green, with several short, undulating, transverse white bars down the back, the edges of which are of a deeper or stronger green than the ground-colour of the body: the under or abdominal part is white. This species is a native of South America. In the British Museum is an elegant specimen.

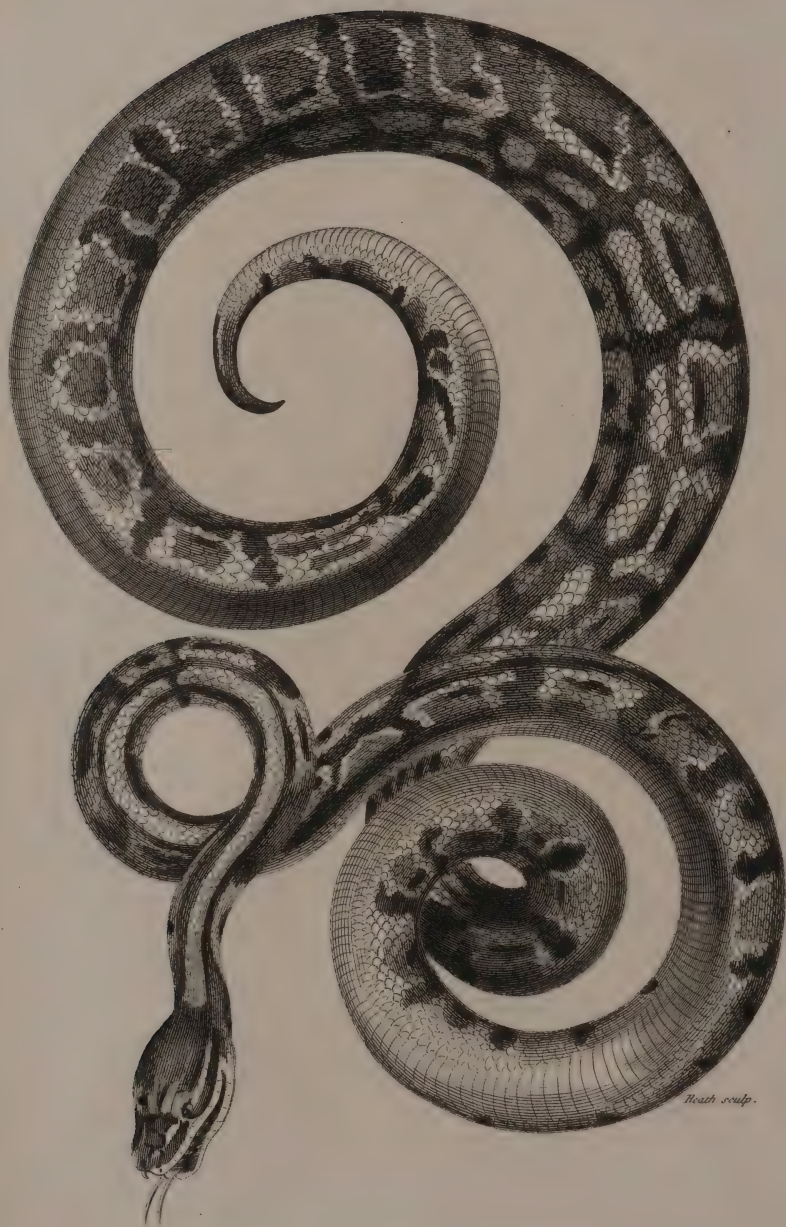
VAR. ?

SEBA describes and figures a remarkable variety of this animal, in which the ground-colour is bright orange, the dorsal bands pale yellow edged with red, and the abdomen pale yellow. It is a native of the East Indies, differing merely in colour from the former.

CANINE BOA.



ROYAL BOA.



ROYAL BOA.

Boa Regia. *B. alba, collo longitudinaliter fasciato, corpore fusco griseoque, vel aurantio roseoque variato.*

White Boa, with longitudinally striped neck, and body variegated either with brown and grey, or orange and rose-colour.

Serpens *Phyticus* Africanus prodigiosus, ab indigenis divino honore cultus. *Seb. 1. t. 62. f. 1.*

Serpens Arabica Brasiliensibus *Ibiboboca* & *Boiguae* dictis. *Seb. 2. t. 102.*

THIS species, which does not appear to have been described by any author except Seba, is in the form of its head, and the general shape of the body, most allied to the *Canina* and *Phrygia*. In its colour it appears to vary, the ground-colour being white, but the variegations sometimes dusky or chesnut, and sometimes of a most elegant orange-red, accompanied by a tinge of blossom-colour on the lighter parts of the pattern: the top of the head is filled by a large patch, from which run two long parallel stripes to a considerable distance on each side the neck, leaving a wider stripe of the ground-colour along the upper part, and which afterwards ceasing, forms a part of the general variegation, which consists of a large and somewhat chain-like dorsal band, running down on each side at moderately distant intervals, into obtuse processes or sinuations regularly bordered by the white ground-colour, the intervening lateral spaces being much lighter, and each marked by a dusky patch on the upper part: the under parts of the body and tail are white:

the head is covered in front with large scales: the tail is extremely short, and tapers pretty suddenly.

EMBROIDERED BOA.

Boa Phrygia. *B. alba, dorso subgriseo, corpore nigro elegantissime limbato.*

White Boa, with a greyish cast on the back; the body most elegantly marked with black lace-like variegations.

Serpens *Phyticus Orientalis Gerende* dictus. *Seb. 1. t. 62. f. 2.*

AMONG the whole Serpent tribe it may be doubted whether there exists a species more truly elegant than the present. Its general size seems to be nearly that of the *Boa canina*, but its length is rather greater in proportion: the ground-colour of the whole animal is white, with a very slight cast of yellowish-brown on the back, while along the whole upper part is disposed a continued series of black variegations, so conducted as to bear a striking resemblance to an embroidery in needle-work: the head is of the same form with that of the *Boa canina*, and marked by three narrow black streaks, which, running along the top of the head and the cheeks, as shewn in the figure, join with the embroidered pattern of the back: the lower surface is entirely white: it seems singular that so remarkable a species should not have been attended to by Linnæus. It is, according to Seba, a native of the East Indies: he adds, that it is called by the title of *Gerende*, and that in some

EMBROIDERED BOA.

*Hill's rept.*



places divine honours are paid to it. In the Leverian Museum are fine specimens of this snake, one of which appears to have swallowed some species of Opposum of about the size of a common rat, the head of which is purposely drawn out from an opening made in the abdomen. In the Museum of the late Dr. William Hunter is also a very beautiful specimen. As this species can never be mistaken for any other yet known, it is the less necessary to particularize the exact number of its abdominal and subcaudal scuta, which, in specimens preserved in covered glasses, is not very easy to investigate: the only circumstance in which it appears to vary is in the intensity of colour in the embroidered pattern, which in some is black, and in others deep chesnut.

VAR. ?

SEBA describes and figures two snakes which appear to me to be varieties of this species: one of a purplish-ferruginous, the other of a yellow-ferruginous colour: the abdomen in the former pale purple, in the latter yellowish white: the general variegations the same as in the first described kind: the purplish variety is said to be from Japan, the other from New Spain. See *Seba*, vol. 2. pl. 79 and 80. Yet, if we may trust to the accuracy of the engraving, they should seem rather to belong to the genus *Coluber*, the tails in both being represented with divided squamæ; but this may perhaps be an inaccuracy on the part of the artist.

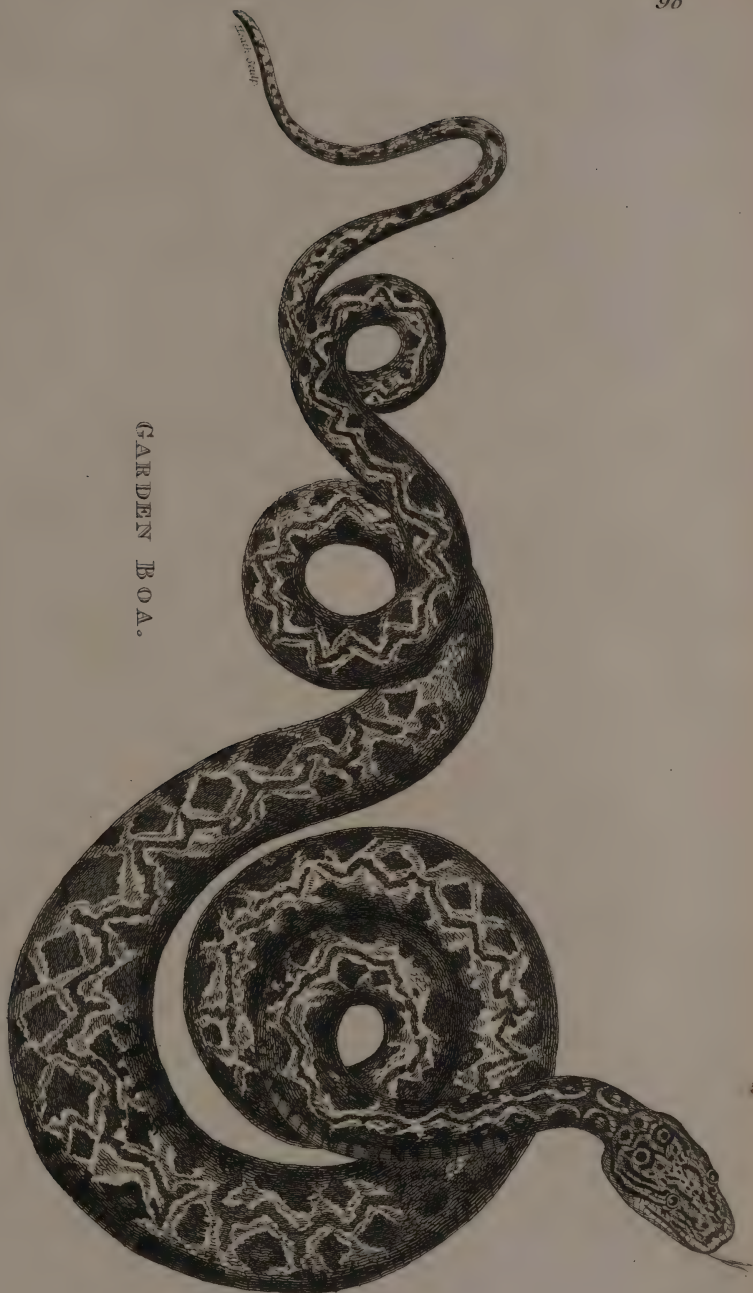
GARDEN BOA.

Boa Hortulana. *B. griseo-flavescens fusco variegata, capite lim-
bato, corpore subcompresso, maculis lateralibus cuneiformibus.*

Yellowish-grey Boa, with brown variegations; those on the head resembling lace: the body subcompressed, and the sides marked by wedge-shaped spots.

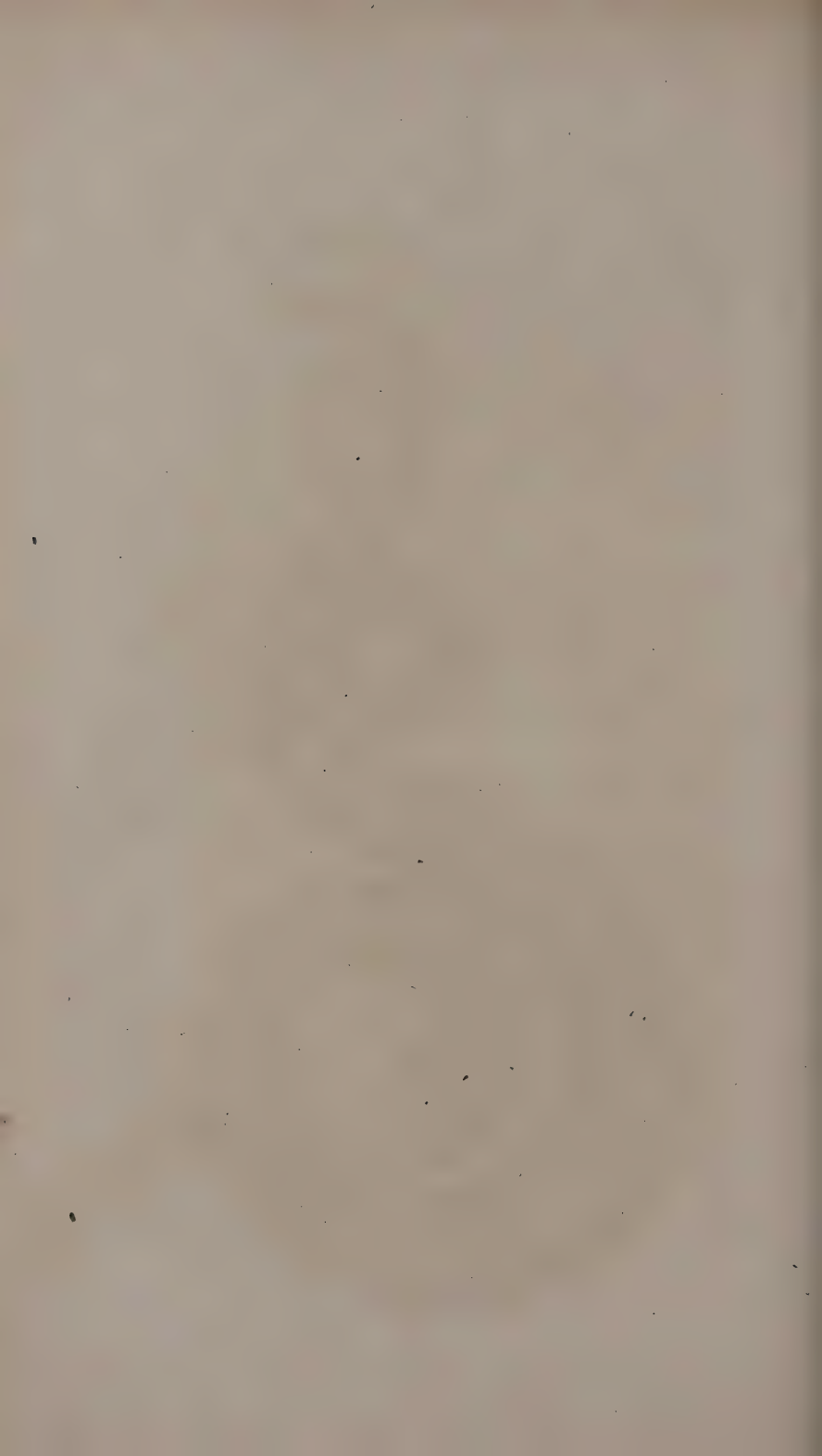
Boa Hortulana. *Lin. Syst. Nat. p. 274. Mus. Ad. Frid. p. 37.*
Abdominal scuta 290, subcaudal 123.

THIS very elegant serpent, which is of moderate size, measuring only a few feet in length, and being of a slender form, has obtained its Linnæan title from the singular pattern of the variegations on the head, which are of a blackish brown on a pale ferruginous or yellowish ground, and in some degree represent the form of a parterre in an old-fashioned garden: the variegations on the body are of similar colour, and are disposed into large circular, and sometimes angular patches on the sides, the centres of some being open, and of others marked by an oblong spot: besides these are interspersed others of smaller size and of different forms: the abdomen is commonly yellowish, with dusky specks and patches: the ground-colour of the whole snake is sometimes pale violet, and the variegations dark purplish brown, but in all its varieties this species may be easily distinguished by the rich embroidered appearance of the pattern, and more particularly by that on the top of the head: the head is also rather broader, and the neck more slender in proportion than in most other Boæ, the body slightly compressed, and the



GARDEN BOA.

Epicratis surcouffi



tail slender. It is a native of South America. Seba figures what appears to be a variety of this species, of a sea-green colour above, with deep chesnut variegations, and pale yellow beneath, with reddish spots.

It is remarkable that Linnæus, in the Museum Adolphi Friderici, appears to describe the *Boa hortulana* as a species of *Coluber*, having the habit or general aspect of a *Boa*.

RAT BOA.

Boa Murina. *B. grisea maculis rotundatis nigris, lateralibus al-bido-ocellatis.*

Grey Boa, with round black spots, those on the sides ocellated with white.

Boa murina. *Lin. Syst. Nat. p. 274.*

Serpens testudinea Americana, murium insidiator. Seb. 1. t. 29.

Abdominal scuta 254, subcaudal 65.

THIS is a middle-sized species, measuring about two feet and a half or three feet in length, and being of a moderately thick form: the colour of the whole upper part is grey or blueish-brown, with several moderately large round black spots dispersed in a somewhat irregular manner along the back and sides; those on the sides being marked with a white patch, so as to appear ocellated: some smaller spots of different forms are also interspersed: the abdomen is of a yellowish white or pale colour, with a few scattered dusky spots: the head is marked on each side by two

longitudinal black stripes: this species is said to feed principally on rats, and to be found in South America.

CROTALINE BOA.

Boa maculis nigris rhombeatis dorsalibus, cauda subtus serie quadruplici squamarum terminata.

Boa with black rhomboid dorsal spots, and tail terminated beneath by four rows of scales.

Crotalus mutus. *Lin. Syst. Nat. p. 373.*

THIS snake Linnæus was induced to place in the genus *Crotalus*, from its habit, and from a certain peculiar disposition of the scales at the tip of the tail, which are distributed into four series, seeming as it were to supply the place of the rattle in the genuine *Crotali*; but since the particular organ itself, which so strikingly distinguishes those serpents, is wanting, it, of course, cannot properly belong to the same genus: it is a native of Surinam, and is a large species, marked on the back by a chain of black rhomboid spots, and is furnished with very large and strong fangs.

FASCIATED BOA.



FASCIATED BOA.

Boa Fasciata. *B. flava, corpore subtriangulo cæruleo annulato.*

Yellow Boa, with subtriangular body annulated with blue.

Bungarum Pamah. *Russ. Ind. Serp. p. 3. pl. 3.*

Abdominal scuta 233, subcaudal 36.

It is to Dr. Patrick Russel that we owe the knowledge of this remarkable species, which is a native of India, and is said to be most frequent in the country of Bengal. It is of a yellow colour, marked with pretty numerous dusky-blue transverse bands, continued, at equal distances, throughout the whole length of the animal, each band completely investing or surrounding the body, but being rather paler beneath than above: the head is rather small than large, and covered in front with large scales: the body is of a trigonal form, the sides sloping very considerably: along the ridge of the back runs a continued series of hexagonal scales, those on the rest of the body being of the usual subovate form: the scuta or lamellæ of the under parts are very broad, and finely ciliated on their margins: the length of the whole animal is something more than five feet, the diameter, in the thickest part, being nearly five inches: the length of the tail five inches only, and its termination rather obtuse.

This snake is among the number of poisonous species, and its bite is considered by the Indians as inevitably fatal. A specimen was brought to Dr. Russel in the month of November, 1788, in

an apparently weak and languid state, having been bruised in taking. Being set at liberty in a room, it crept slowly towards an obscure corner, where a chicken being presented to him he took no particular notice of it, and even suffered the bird to stand on his back. As he shewed no disposition to bite, his jaws were forcibly opened, and the thigh of the chicken being placed between them, the mouth was so closed over it as to oblige the fangs to act. The bird, when disengaged, shewed immediate symptoms of poison, and after several ineffectual efforts to rise, rested with the beak on the ground, the head being seized with trembling. In the space of twenty minutes it lay down on one side, and convulsions soon supervening, it expired within twenty-six minutes from the bite. This was the only experiment made; the snake itself dying in the course of the next day; but from the languid state in which it appeared, and the effect of its bite on the chicken, it may be concluded that, when in full vigour, it must be an animal of a highly dangerous nature. Dr. Russel observes, that the fangs are very short for the size of the snake, and that two are visible on each side.



VIPERINE BOA.

Heath sculp.

VIPERINE BOA.

Boa Viperina. *B. grisea, fascia dorsali undulata nigra albido-marginata, lateribus nigro maculatis.*

Grey Boa, with black undulating dorsal band edged with white, and sides spotted with black.

Padain Cootoo. *Russ. Ind. Serp. p. 5. t. 4.*

Abdominal scuta 209, subcaudal 19.

THIS also is an Indian species, first described in the work of Dr. Russel. It is about a foot and half in length, and of a moderately deep brown colour, the back being marked throughout the whole length by a broad undulating black band, with a narrow yellowish white margin, while along the sides runs a row of somewhat irregular roundish black spots: the under part of the animal is of a pearl-colour. The head is hardly broader than the neck, oblong, roundish, depressed, subtruncate, and covered with small scales: the teeth are small and numerous, and as there is a marginal row in the upper jaw, there are of course no fangs: the trunk or body is round, of nearly equal thickness, and coated with small, orbicular, close-set, carinated scales: the tail is only an inch and half in length, and is thick, tapering to a sharp point: the vent is longitudinal: and the scuta very short, scarce extending from side to side more than a third part of the diameter of the abdomen.

This snake, Dr. Russel informs us, is said to produce by its bite a slow wasting of the fingers and toes, similar to what happens in some leprous

cases. A living specimen, however, which he obtained in Dec. 1788, from Ganjam, enabled him to make some experiments with it on chickens; but though it arrived to excellent order, and bit ferociously, the bite was followed by no symptoms of poison.

LINEATED BOA.

Boa Lincata. *B. atrocærulea lineis transversis arcuatis albopunctatis, abdomine albido.*

Blackish-blue Boa, with white-dotted transverse arcuated lines, and whitish abdomen.

Geedi Paragoodoo. *Russ. Ind. Ser. p. 1. t. 1.*

Abdominal scuta 209, subcaudal 47.

THE *Geedi Paragoodoo* is of a slender form, with the general appearance of a *Coluber* rather than a Boa. It is of an extremely dark blue colour, so as to appear almost black in certain lights, and is marked throughout the whole length of the upper part by several transverse curved and dotted white lines at somewhat unequal distances, and varying in number in different individuals from about forty-two to fifty: they are so disposed as almost to represent so many large spotted circles, if viewed from above: the sides of the body, near the scuta, are dun-coloured, and the whole range of scuta, both abdominal and subcaudal, yellowish-white: the head is covered with large scales; the body with small ovate ones, and down the back runs a row of hexagonal scales: the tail is about

three inches and a half long, and tapers to a slender point.

This snake is not uncommon at *Vizagapatam*, as well as at *Boni*, &c. and some young ones were sent to Dr. Russel from *Masulapatam*, under the name of *Cobra Monil*. The natives of India, who generally exaggerate the noxious character of their serpents, assert that the bite of this animal produces immediate death. The experiments of Dr. Russel, however, prove that it is seldom fatal to chickens in less than half an hour, and to dogs in less than an hour and ten minutes. Its poison was also observed to cause less violent convulsions in the animals infected by it than that of the *Cobra de Capello* and another highly poisonous Indian snake called *Katuka Rekula Poda*; but produced a greater degree of stupor.

On the first of August, 1788, a snake of this species was received by Dr. R. from *Bimlipatam*, after a journey of seven hours, in so languid a state that it was with much difficulty made to bite a chicken on the breast: a little speck of blood was visible on the skin of the chicken, but without any mark of the fangs having acted; notwithstanding which, in about twenty-five minutes the bird began to droop, and in a few minutes more, growing rapidly worse, expired, without any considerable convulsion, in about forty minutes from the bite.

At the distance of five days, the same snake was found in high vigour and beauty, having in that interval cast its skin; and a chicken bitten on

the pinion was soon seized with apparent stupor, though it continued to walk; but in ten minutes it was unable to stand, and within a quarter of an hour lay along the ground, as if asleep: in twenty minutes it made several ineffectual efforts to rise; was soon afterwards faintly convulsed, and at the end of the half hour expired.

A *Geedi Paragoodoo* which had been caught at *Casem Cottah* the day before, was made to bite a large, stout dog on the thigh near the groin: it held fast for more than twenty seconds; but the fangs seemed to have penetrated no deeper than the skin, there being barely the appearance of blood; and some of the poison was found about the supposed place of puncture. The dog, when first wounded, howled much, but on being set at liberty, walked about without any symptoms of poison: in ten minutes he drew up the wounded thigh, still continuing on his legs: but in a quarter of an hour he couched and howled, and the thigh became more paralytic, though he was still able to raise himself: in twenty-five minutes both thighs were observed to be paralytic: in the course of the second hour he grew manifestly disordered; became torpid, and lay panting on his side; and at the end of the second hour expired, without any remarkable appearance of convulsions. The part bitten, being examined about four hours after death, was observed to be scarcely swelled or discoloured; a circumstance different from what is commonly observed in the bites of other poisonous serpents.

Another dog, of much smaller size, bitten by the same snake, expired in one hour and ten minutes; having for the last ten minutes been affected with strong convulsions. In this case about a quarter of an hour elapsed before the animal shewed symptoms of being infected; but towards the end of the hour both the hind legs were become paralytic.

It appears, therefore, that this species of Boa is of a highly poisonous nature.

HORATTA BOA.

Boa Horatta. *B. atrofusca, fascia utrinque laterali undulata maculisque spinalibus flavis.*

Dark-brown Boa, with a waving yellow band on each side, and a row of dorsal spots.

Horatta Pam. *Russ. Ind. Serp. p. 2. t. 2.*

Abdominal scuta 150, subcaudal 25.

THIS is a small species, measuring only about fifteen inches in length. Its colour is a dark brown, with a row of spots on the ridge of the back, from the neck to the end of the tail, varying a little in size and figure, but all of a dull yellowish colour edged with black: along each side runs a conspicuous waving fillet of the same colour, and on the head are four remarkable dark spots, the largest of which bears some resemblance to the shape of a horse-shoe: the scuta are yellowish-white, and all the abdominal ones are marked with three or four dusky spots: the head is rather small

than large, and is entirely covered with small carinated scales; the body with somewhat larger ones: the tail tapers suddenly, and is an inch and half in length. Specimens of different sizes were found to vary very little in colour, still less in spots, and very little in the number of scuta. The fangs or poisoning organs of this snake show it to be noxious; but in what degree could not be ascertained by Dr. Russel, who could not meet with a living subject to make the necessary experiments with. It is reported, however, to be one of the most fatal of serpents.

SIAMESE BOA.

Boa Hipnale. *B. flava, supra maculis magnis irregularibus subtransversis albis fusco-marginatis fasciata.*

Yellow Boa, fasciated above by large irregular subtransverse white spots with brown edges.

Serpens, s. Vipera Siamensis perelegans. *Seb. 1. t. 34.*

Abdominal scuta 179, subcaudal 120.

A SMALL species, but very long in proportion to its breadth; the circumference of the body being scarce more than an inch and half, and the length from two to three feet: the head shaped like that of the Boa canina: the colour of the whole animal pale yellow above, with pretty numerous transverse broken bars of white, with black or deep brown edges: the abdomen yellow. This species is said to be a native of the East Indies, and particularly of the kingdom of Siam.

HOG-NOSED BOA.

Boa Contortrix. *B. grisea, fusco maculata, corpore crasso brevi, naso simo.*

Grey Boa, spotted with black, with short thick body, and turned-up nose.

Hog-nosed Snake. *Catesb. Car. 2. pl. 56.*

Boa Contortrix. *Lin. Syst. Nat. p. 373.*

Abdominal scuta 150, subcaudal 40.

A SMALL species, seldom exceeding the length of about fifteen inches: head large, with the cheeks swelling out like those of vipers; the nose turning up, like that of a hog: body very thick towards the head: colour pale brown, with several large black spots or patches disposed along the back and sides: towards the lower part of the back the spots form a kind of black bars over that part, the ground-colour between them being yellowish: the abdomen is of a dusky white with small blackish spots. This species is a native of North America, and is of a poisonous nature: it is slow in its motions, and has a malevolent aspect: the tail is nearly a third of the length of the whole animal.

PALPEBRAL BOA.

Boa Palpebrosa. *B. Albida, glauco fasciata, palpebris extantibus.*
Whitish Boa, obscurely fasciated with grey, with prominent
eyelids.

Schlingende Natter. *Merrem Beytr. Zur. Naturg.* 2. p. 20. t. 3.
Abdominal scuta 112, subcaudal 51.

LENGTH about fifteen inches: head rather large, and covered in front with large scales: eyebrows remarkably prominent: body thick in proportion to its length: colour pearly grey above, with obscure transverse dusky or blueish undulations: beneath pale yellow-brown, with a small transverse oval black spot at the edge of every abdominal scutum, and a middle range of similar spots from the vent to the end of the tail, the extremity of which, for about the length of half an inch, is furnished with divided scales: native country unknown: described by Mr. Merrem. This snake I have arranged among the Boæ rather than the Colubri, on account of the vast predominancy of the *Scuta* over the *Squamæ* on the under surface of the tail.

ANNULATED BOA.

Boa Annulata. *B. subferruginea, maculis dorsalibus orbiculatis nigris annulo inclusis, lateralibus reniformibus ocellatis, abdomine fusco undulato.*

Subferruginous Boa, with black orbicular dorsal spots included in rings, reniform ocellated lateral spots, and abdomen undulated with dusky variegations.

Mer. Surin. t. 5.

THIS is rather a small species, measuring about two feet in length: the head is rather large, as in the *Boa hortulana* and *Enydria*, to which this animal is considerably allied, in its general appearance, but the back is marked with moderately large round black spots almost encircled by a narrow zone of the same colour, including in consequence an interior circle of the ground-colour, which is yellow ferruginous: along the sides runs a row of large reniform black spots, accompanied by a small round one between each: the abdomen, which is cinereous, is variegated by dusky undulations and spots in a somewhat transverse direction.

This species occurs in the Museum of Dr. William Hunter. The only author who has figured the animal seems to be Madam Merian, who has introduced it as an ornament to her fifth plate of the *Surinam Insects*: it is, therefore a native of South America.

COLUBER. SNAKE.

*Generic Character.**Scuta* abdominalia.*Squamæ* subcaudales.*Scuta* or undivided lamellæ
under the abdomen.Broad alternate *Scales* under
the tail.

THIS is by far the most numerous of all the Linnæan genera of Serpents, and the species differ greatly in size and habit, according to their respective tribes; some, as the Vipers, having large, flattish, and subcordate heads, with rather short than long bodies and tails; while others, as the major part of the harmless serpents, have, in general, small heads, with longer bodies and tails in proportion. In some few species, exclusive of the usual subcaudal scales, are a few *scuta* or undivided lamellæ, either at the beginning, or towards the tip of the tail. It is to be observed, that in the investigation of this genus the *subcaudal scales*, though alternate, are reckoned by pairs, so that the number marked under the respective species is always to be understood to mean so many pair.

COMMON VIPER.



Death sculp.

COMMON VIPER.

Coluber Berus. *C. cinereus, macula capitis biloba, vitta dorsali atra dentato-repanda.*

Cinereous Viper, with a bilobate spot on the head, and a black flexuous or zigzag band down the back.

Coluber Berus. *Lin. Syst. Nat. p. 377.*

The Viper. *Penn. Brit. Zool. 4. p. 25.*

Vipera. *Gesn. Aldrov. Raj. &c. &c.*

Abdominal scuta 146, subcaudal scales 39.

THE Viper, which appears to be pretty generally diffused over the whole ancient continent, and which is by no means uncommon in our own island, has been known from times of remote antiquity, though all the particulars relative to its nature and manners are even yet not fully understood. It appears to vary considerably in colour, from a pale or yellow-ferruginous to a deep or dull brown, but all these varieties agree in being marked by a continued chain or series of confluent rhomboid blackish spots, which commencing at the back of the head, are continued to the extremity of the tail, growing proportionally wider and more confluent as they approach that part, forming a kind of transversely barred pattern on its surface: the head is broad, somewhat flattened, and bulges out more or less on each side at the back part: the front of the head is blackish, and on the upper part is a large divided and somewhat heart-shaped mark, or spot, the obtuse divisions of which are directed backwards: the lips are somewhat barred or variegated with black and light grey or whitish, and along each side of the

body runs a row of roundish or rather obscurely subtrigonal dusky spots, continuing to the end of the tail: the scales on the whole upper part of the animal, are carinated: the under surface is of a dusky or blackish colour, with a blueish gloss somewhat resembling that of polished steel: the general length of the Viper is about a foot and half, or two feet, though some have been seen of much greater length, measuring near three feet: the fangs are situated, as in other poisonous serpents, on each side the fore part of the upper jaw, and are generally two in number, with a few smaller ones lying near the principal or large fangs, as if intended by Nature to supply the place of the former when lost either by age or accident.

The Viper has always been considered as the most poisonous of the European serpents, and innumerable are the cases recorded by medical and other writers of the fatality of its bite: yet the instances, in our own island at least, seem to be far less frequent than generally supposed; and though the bite of this animal produces a painful and troublesome swelling, yet it is rarely of any other bad consequence. No doubt the case must differ, as in the bite of every other poisonous serpent, according to the nature of the part bitten, the constitution of the person, the strength and vigour of the animal, the season of the year, &c. &c. and if the bite happens directly on a vein, it may perhaps be productive of the most alarming symptoms, and even sometimes prove fatal: yet

Fontana, even in the warm climate of Italy, seems to doubt whether any well-attested instance could be adduced in which the viper had killed any person by its bite: but so discordant are the testimonies of authors on the subject, that the judgement is necessarily left suspended, not only relative to the effect of the bite, but to the nature of the poison itself, and its effect on the animal frame either when injected into the blood, or received into the stomach. The poison of the Viper, according to Dr. Mead, and his associates in the experiment, is, “when diluted with a little warm water, very sharp and fiery when tasted with the tip of the tongue, as if the tongue had been struck through with something scalding or burning: this sensation went off in two or three hours; and one gentleman, who would not be satisfied without trying a large drop undiluted, found his tongue swelled, with a little inflammation; and the soreness lasted two days.” On the contrary, the Abbé Fontana and some others describe it as of no particular acrimony of taste, but rather resembling oil or gum; and Dr. Russel, in his work on Indian Serpents, affirms the same even of the poison of the Cobra de Capello. Nearly equal contradictions take place relative to the effect of the viperine poison taken into the stomach; Boerhaave quoting the well-known case of Jacob Sozzi, who at the court of the Duke of Tuscany is said to have swallowed three drams of this poison without experiencing any ill effect; while Fontana, on the

contrary, affirms, that this cannot be done with impunity, though it may not produce symptoms like those of the bite. Some of the older writers equally disagree on this point; Matthiolus affirming, that when sucked out of the wound it has proved fatal, while others have admitted the general opinion of the ancients, that it was harmless when thus received; and on this supposition depended the practice of the *Psylli*, African tribes who followed this mode of curing those who were bitten by serpents, and who were employed, according to Lucan, by Cato, in his march through the Lybian deserts, for the recovery of his wounded soldiers. Cato is also said to have assured his men, who feared to drink of the fountains, lest they should be infected by the poison of serpents, that, however noxious the bites of those animals might be, yet the poison must lose its effect when mixed with the water and drank.

“ Jam spissior ignis,

Et plaga, quam nullam Superi mortalibus ultra

A medio fecere die, calcatur, et unda

Rarior: inventus mediis fons unus arenis

Largus aquæ: sed quem serpentum turba tenebat

Vix capiente loco: stabant in margine siccae

Aspides, in mediis sitiebant Dipsades undis.

Ductor, ut aspexit perituros fonte relicto,

Alloquitur: Vana specie conterritæ leti

Ne dubita miles tutos haurire liquores:

Noxia serpentum est admisto sanguine pestis:

Morsu virus habent, et fatum dente minantur:

Pocula morte carent: dixit, dubiumque venenum

Hausit.”

And now with fiercer heat the desert glows,
And mid-day gleamings aggravate their woes :
When lo ! a spring amid the sandy plain
Shews its clear mouth to cheer the fainting train.
But round the guarded brink in thick array
Dire aspics roll'd their congregated way ;
And thirsting in the midst the torrid Dipsas lay.
Blank horror seiz'd their veins ; and at the view
Back from the fount the troops recoiling flew :
When, wise above the crowd, by cares unquell'd,
Their awful leader thus their dread dispell'd :
Let not vain terrors thus your minds enslave ;
Nor dream the serpent brood can taint the wave :
Urg'd by the fatal fang their poison kills ;
But mixes harmless with the bubbling rills.
Dauntless he spoke, and bending as he stood,
Drank with cool courage the suspected flood.

“The symptoms,” says Dr. Mead, “which follow the bite of a Viper, when it fastens either one or both its greater teeth in any part of the body, are an acute pain in the place wounded, with a swelling, at first red, but afterwards livid, which by degrees spreads farther to the neighbouring parts ; with great faintness, and a quick, though low, and sometimes interrupted, pulse ; great sickness at the stomach, with bilious, convulsive vomitings, cold sweats, and sometimes pain about the navel ; and if the cure be not speedy, death itself ; unless the strength of nature prove sufficient to overcome these disorders : and though it does, the swelling still continues inflamed for some time ; nay, in some cases, more considerably upon the abating of the other symptoms than at the beginning ; and often from the small wound runs a

sanious liquor, and little pustules are raised about it: the colour of the whole skin, in less than an hour, is changed yellow, as if the patient had the jaundice. These mischiefs (although different climates, season of the year more or less hot, the greater or lesser rage of the Viper, the animal itself of a larger or smaller size, and consequently able to communicate more or less venom, the wound made deeper, in a part more nervous or tendinous, and therefore receiving more of the poisonous liquor, and the like circumstances, may variously heighten or abate them), yet usually discover themselves much after the same manner in all; unless the bite happen not to be accompanied with the effusion of that liquor which is the main instrument and cause of this violent and shocking disturbance."

Dr. Mead caused several animals, viz. dogs, cats, and pigeons, to be bitten by an enraged Viper; which animals generally died, some in a longer, and some in a shorter space of time; but it was observed that they all, immediately after being bitten, exhibited signs of acute pain, as if affected with sickness, faintings, convulsions, &c. The head of a large Viper lay three hours after it was cut off; it was perfectly flaccid, and without motion: a pigeon, wounded on the thigh by the fangs of this head, was presently convulsed, &c. as from the bite of the living animal, and died in seven hours.

The poison of the Viper was in ancient times collected by barbarian nations as a poison for their

arrows, the Scythians, according to Pliny, using it for that purpose mixed with human blood: the poison of other serpents is used in a similar manner by savage nations at the present day*.

“The viperine poison,” says Boerhaave, “is rendered inactive by digestion in the stomach and bowels, so that it will not afterwards exert its sad effects on the blood; for a whole ounce of the viperine venom taken by the mouth will not kill an animal; when at the same time a small needle only, dipped in the same fluid, taking up perhaps no more than a hundredth part of a drop, and then thrust into the blood of the living animal, almost infallibly kills.”

“A Viper,” says the same author, “being enraged by the members of the Tuscan Academy, and then suffered to bite the nose of a strong bull, the animal died in a short time, and being opened by the most expert anatomists, no uncommon alteration could be perceived either in the solid or fluid parts of the beast.”

The most established application for the bite of a Viper is common olive oil, thoroughly rubbed on the wounded part: this the Viper-Catchers† use, as is pretended, with perfect success; and all other applications, as volatile alkali, &c. &c. seem of far less certain efficacy.

* In this theory of poisoning darts there appears nothing improbable when we consider the effects of the variolous matter dried on the point of a lancet and used in inoculation.

† See the case of Isaac Oliver, in the Philosophical Transactions.

The Viper, though so much dreaded on account of its bite, has been very highly esteemed, both by the ancients and moderns, in a medical view, and used as a restorative and strengthening diet. This idea seems to have originated from the animal's casting its skin, like other snakes, and thus appearing, as it were, in a state of renovated youth; and the Snake being made the emblem of health, and consecrated to Æsculapius, must have depended on the same idea. The ancients used the flesh of the Viper in leprous and other cases. The Greek physician Craterus, mentioned so often by Cicero in his epistles to Atticus, cured, as Porphyrius relates, a miserable slave, whose skin in a strange manner fell off from his bones, by advising him to feed on Viper's flesh in the manner of fish. Antonius Musa, physician to Octavius Cæsar (Augustus), is said by Pliny to have ordered the eating of Vipers in the case of otherwise incurable ulcers, which by this method were quickly healed. Galen says that those who are afflicted with Elephantiasis are wonderfully relieved by eating Viper's flesh dressed like eels; and relates very remarkable cures of this disease performed by means of viper wine. Aretæus, who probably lived about the same time with Galen, and who of all the ancients has most accurately described the above disorder, commends, as Craterus did, the eating of Vipers instead of fish in the same diseases. Lopez, in his History of Congo, says the negroes eat roasted adders, and account them a most delicious food. In India the Cobra de Capello is said

to be successfully given to be eaten by persons in long wastings and declines. In France and Italy the broth, jelly, and flesh of Vipers is in much esteem as a restorative medicine*. Dr. Mead thinks the best method is to boil them like fish, “and if this will not go down, though it is really delicious fare,” to make use of wine in which they have been digested two or three days in a gentle heat, from which, he says, he has seen very good effects in obstinate lepras.

Though from these attestations it sufficiently appears that the flesh of the Viper is really nutritive and good, yet, such are the revolutions of medical as well as of common taste, that Viper’s flesh has now lost a great part of its former credit, and is very rarely prescribed in modern practice.

The apparatus of poison in the Viper is the same as in the Rattle-Snake and all other poisonous serpents, and will be found described anatomically under that article, &c.

The Viper, as before observed, is subject to vary much in colour, being sometimes of a fine pale grey, or pale ferruginous, with very deep and distinct markings or pattern: sometimes dull brown with less distinct ditto: and, lastly, black, with scarce perceptible pattern, which latter variety has

* The above account of the supposed virtues of Viper’s flesh is chiefly from Dr. Mead. It may be added, that the celebrated Sir Kenelm Digby, for the recovery of his beloved wife, the Lady Venetia Digby, from a consumption, caused her to feed on capons fattened with vipers.

been called *Vipera Anglica nigrans*, and is by some considered as a distinct species.

The Viper is viviparous, producing its young towards the close of summer. "On the 4th of August, 1755," says Mr. White*, "we surprised a large female Viper, which seemed very heavy and bloated, as it lay on the grass, basking in the sun. When we came to cut it up, we found that the abdomen was crouded with young, fifteen in number; the shortest of which measured full seven inches, and were about the size of full-grown earthworms. This little fry issued into the world with the true viper spirit about them, shewing great alertness as soon as disengaged from the belly of the dam: they twisted and wriggled about, and set themselves up, and gaped very wide when touched with a stick, shewing manifest tokens of menace and defiance, though as yet they had no manner of fangs that we could find, even with the help of our glasses." Mr. White, in another part of his work, informs us, that in the month of May a female Viper was opened, which had in it a chain of eleven eggs, about the size of those of a blackbird; but not so far advanced as to shew the rudiments of the young.

"Several intelligent folks," adds Mr. White, "assure me that they have seen the Viper open her mouth, and admit her helpless young down her throat on sudden surprises, just as the Opos-

* White's Selburne.

sum does her brood into the pouch under her belly upon the like emergencies; and yet the London Viper-Catchers insist on it to Mr. Barrington that no such thing ever happens."

Sir Thomas Brown, however, seems inclined to believe this circumstance. "The young," says he, "supposed to break through the belly of the dam, will upon any fright, for protection, run into it; for then the old one receives them in at her mouth, which way, the fright being past, they will return again, which is a peculiar way of refuge, and although it seem strange, is avowed by frequent experience and undeniable testimony."

I must add, that I have myself received on this subject the information of a gentleman of great accuracy of observation, and who assures me of the truth of this particular in the natural history of the Viper.

VAR. ?

BLACK VIPER.

Coluber Prester. *C. niger, vitta dorsali dentata nigerrima.*

Black Viper, with jet-black dentated dorsal band.

Coluber Prester. *Lin. Syst. Nat. p. 337.*

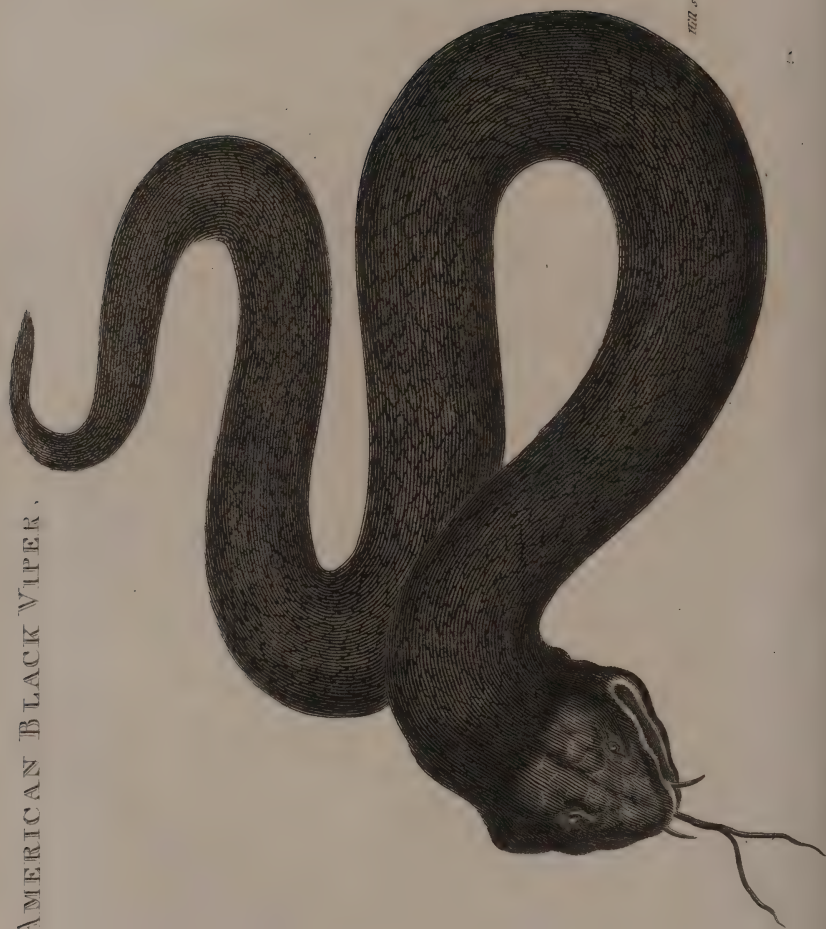
Vipera Anglica nigrans. *Petiv. Mus. p. 17. n. 104.*

Abdominal scuta 152, subcaudal squamæ 32.

THIS Viper is found in some parts of England, and is said likewise to occur in Austria, and in some of the northern regions of Asia. It resembles the common Viper in every particular except

colour; being of a deep black, with an indistinct appearance of the dorsal band of a still more intense colour: the edges of the lips are bordered with whitish specks, and in some specimens the neck and tail are marked with a few indistinct yellowish spots. Mr. Pennant, in the *British Zoology*, considers it as a mere variety of the common viper; but by others, and particularly by Laurenti, it is regarded as a distinct species; and is ranked as such in the *Systema Naturæ* of Linnaeus. It is generally supposed to be equally poisonous with the common Viper: yet if the Austrian Black Viper of Laurenti be really the same kind with that found in other parts of Europe, it should seem to be innoxious: but perhaps the specimens which he made use of in conducting his experiments had either not arrived at their full size and vigour, or had previously discharged their poison by biting other animals: since the pigeons and chickens which he exposed to its fury, were no otherwise injured than by mere puncture, without suffering any symptoms of poison.

AMERICAN BLACK VIPER.

*Hill sculp.*

AMERICAN BLACK VIPER.

Coluber Cacodæmon. *C. ater, capite lato tumido, corpore crasso.*

Black Viper, with broad tumid head, and thick body.

Black Viper. *Catesb. Carol. 2. pl. 44.*

THIS, according to Catesby, appears to be about the size of the Common Viper, but of a much thicker form, and entirely of a rusty black colour: it is slow in its motions, and when irritated, spreads its head, which is naturally large, into a surprising width; threatening, at the same time, with a horrid hiss: the fangs are large, and the animal is said to be as dangerous as the Rattlesnake. It is a native of Carolina, chiefly frequenting the higher grounds.

EGYPTIAN VIPER.

Coluber Vipera. *C. subferrugineus, fusco maculatus, subtus albidus, cauda brevi mucronata.*

Subferruginous Viper, spotted with brown, beneath whitish, with short mucronated tail.

Coluber Vipera. *Linn. Syst. Nat. p. 275. Hasselq. itin. p. 340.*

Abdominal scuta 118, subcaudal scales 22.

THIS, which is said to be the officinal Viper of the Egyptians, seems to have been first accurately described by Hasselquist, who informs us that it is imported in considerable quantities every year to Venice for the use of the apothecaries in the

composition of the Theriaca, &c. Its size is somewhat smaller than that of the common Viper: the head not so flat on the top, but very protuberant on each side: the snout very obtuse: the body thick towards the middle, and somewhat quadrangular, but thin and cylindric towards the head and tail, which latter is short, slender, conical, and terminated by a slightly incurved horny point or tip: the scales on all the upper parts of the animal are oval and carinated: the colour above is pale-ferruginous with darker spots, and beneath entirely whitish: the usual length of this species, according to Hasselquist, is about two spans and an inch, of which the tail measures only an inch. This is by some supposed to be the Asp of Cleopatra, by the bite of which that high-spirited princess determined to die, rather than submit to be carried to Rome in order to grace the triumph of Augustus. It seems, however, utterly impossible to determine this point. Mr. Bruce, as the reader will find in the description of the *Cerastes*, rather supposes that serpent to have been the species employed. Mr. Schneider, in his work, entitled *Historia Amphibiorum*, considers the Egyptian Viper above described to be the true *Dipsas* of the ancients which was popularly reported to kill by thirst.

AMMODYTES.

Coluber Ammodytes. *C. glauco-fuscus, vitta dorsali dentata atra, verruca nasali erecta.*

Glaucous-brown Viper, with dentated black dorsal band, and upright nasal wart.

Coluber Ammodytes. *Lin. Syst. Nat. p. 376. Aldr. Serp. 169.*
Abdominal scuta 142, subcaudal squamæ 32.

THIS species is greatly allied to the Viper in general appearance, but is always distinguished by an erect pointed process on the tip of the snout: its usual colour is either blueish-grey or brown, with a continued black dorsal band resembling that of the Viper. It is found in many parts of the eastern regions, and is used medicinally for the same purposes as the common Viper. It is considered as an extremely poisonous species, and, according to Matthiolus, proves fatal in the space of three hours.

CHARASIAN VIPER.

Coluber Charasii. *C. rufus, naso supra subacuminato, corpore striis brevibus fuscis transversis subconfluentibus notato.*

Rufous Viper, with the nose acuminate above, and the body marked with short, subconfluent, dusky transverse streaks.

La Vipere. *Charas. Nov. Exper. t. 1. A. A. A.*

THIS species is described by a French author of the name of Charas, who, though well acquainted with the anatomy of the animal, and the

structure and use of the fangs and receptacle of poison, yet contended, in opposition to the celebrated Redi, that when a Viper bit, the symptoms of poison succeeding the bite, were caused by what he termed the "*enraged spirits*" of the creature, and not by the supposed poisonous fluid. This species has the general appearance of the *Berus*, or common viper, but is distinguished by the want of the dorsal band, so conspicuous in that animal, and by the upright, subacuminated tip of the snout: the colour of the upper parts is ferruginous, marked with several short, scattered, and subconfluent letter-like streaks here and there dispersed on the skin: the under parts are of a dusky colour, with a steely lustre, and are speckled with yellow. This species is a native of France, and in its general manners, as well as in size, appears to resemble the common Viper, of which it has sometimes been suspected a variety.

REDI'S VIPER.

Coluber Redi. *C. fusco-ferrugineus, serie dorsali quadruplici transversa striarum brevium subconfluentium fuscæ.*

Ferruginous-brown Viper, with a quadruple transverse dorsal series of short subconfluent brown streaks.

Coluber Redi. *Lin. Syst. Nat. Gmel. p. 1091.*

Abdominal scuta 152, subcaudal squamæ 33.

THIS is greatly allied to the common Viper, but differs in being marked throughout the whole length of the upper parts, with a quadruple series

of short, transverse, alternate streaks, of which the intermediate ones are often confluent: the colour of the under parts is rufous, more especially towards the head and tail. This is the *Vipera* of Redi, and is the species with which the experiments of that philosopher relative to animal poisons were principally made. It is found in many parts of Italy, as well as in Austria, and is said to be more poisonous than the common Viper.

ASP.

Coluber Aspis. *C. rufescens, maculis dorsalibus subrotundatis fuscis alternis, versus caudam subconfluentibus.*

Rufescent Viper, with roundish, alternate, dusky, dorsal spots, subconfluent towards the tail.

Coluber Aspis? *Lin. Syst. Nat. p. 378.*

L'Aspic. *Cepede Serp. p. 53. pl. 2. f. 1.*

Abdominal scuta 155, subcaudal scales 37.

THE true Asp of the ancients seems to be entirely unknown, owing to the discordant descriptions and want of precision in the works of ancient authors; but the Linnæan Coluber Aspis is supposed to be the serpent described under the name of *Aspic* by the Count de Cepede, who informs us that it is a native of France, and particularly of the northern provinces of that country. The individual described by Cepede measured about three feet in length, of which the tail measured three inches and eight lines: the head is rather large, and covered with small carinated scales, the body with larger, of similar structure:

the colour is pale rufous grey, and along the upper parts are three longitudinal ranges of roundish deep-rufous spots, bordered with black, and which unite or become confluent towards the tail, in such a manner as to exhibit the appearance of a zigzag band, resembling in some degree that of the common Viper: the under parts are of a dusky colour, marbled with dull yellow: in the structure of its fangs it resembles the Viper, and is said to be equally poisonous. I must not omit to observe that Mons. Latreille is not willing to allow this serpent to be the real *Coluber Aspis* of Linnæus.

SWEDISH VIPER.

Coluber Chersea. C. subferrugineus, vitta dorsali atra flexuosa, capite subtus albido.

Subferruginous Viper, with black flexuous dorsal band, and head whitish beneath.

Coluber Chersea. Linn. Syst. Nat. p. 377.

Abdominal scuta 150, subcaudal scales 34.

THIS is said by Linnæus to be extremely nearly allied to the preceding, of which it might even be supposed a variety, but is of smaller size, not often exceeding the length of a span: it is said to be most frequent in the province of Smoland, where it is greatly dreaded by the inhabitants, who consider its bite as mortal: its colour is a dusky rufous brown, with a flexuous dorsal band of a deeper colour, as in the common Viper: the head is ovate, of a pale colour, and marked with

a heart-shaped dusky spot, the divisions of which are directed backwards. In the Memoirs of the Swedish Academy is an account of a young man, a labourer, bit by this animal on the toe of the left foot: in six hours space the whole leg and thigh were red and swelled; the pulse intermitted, and the patient was oppressed with pains in the head and bowels, accompanied by lassitude, &c. the juice of the ash-leaves being in Sweden a popular specific in similar cases, a glass of the expressed juice, mixed with wine, was exhibited every half hour, and a cataplasm of the bruised leaves applied to the wound: in the evening a glass of warm olive oil was swallowed. By these means the patient was greatly relieved; slept well during the night, and found the swelling much reduced by the next morning; but, neglecting to repeat the same remedies, it again returned, and was again dissipated by the same applications, and in two or three days the patient recovered. Linnæus, however, is said to have been not so fortunate in his attempts to cure, by means of olive oil, a woman wounded by this kind of viper, since the medicine proved inefficacious, and the woman died.

GREEK VIPER.

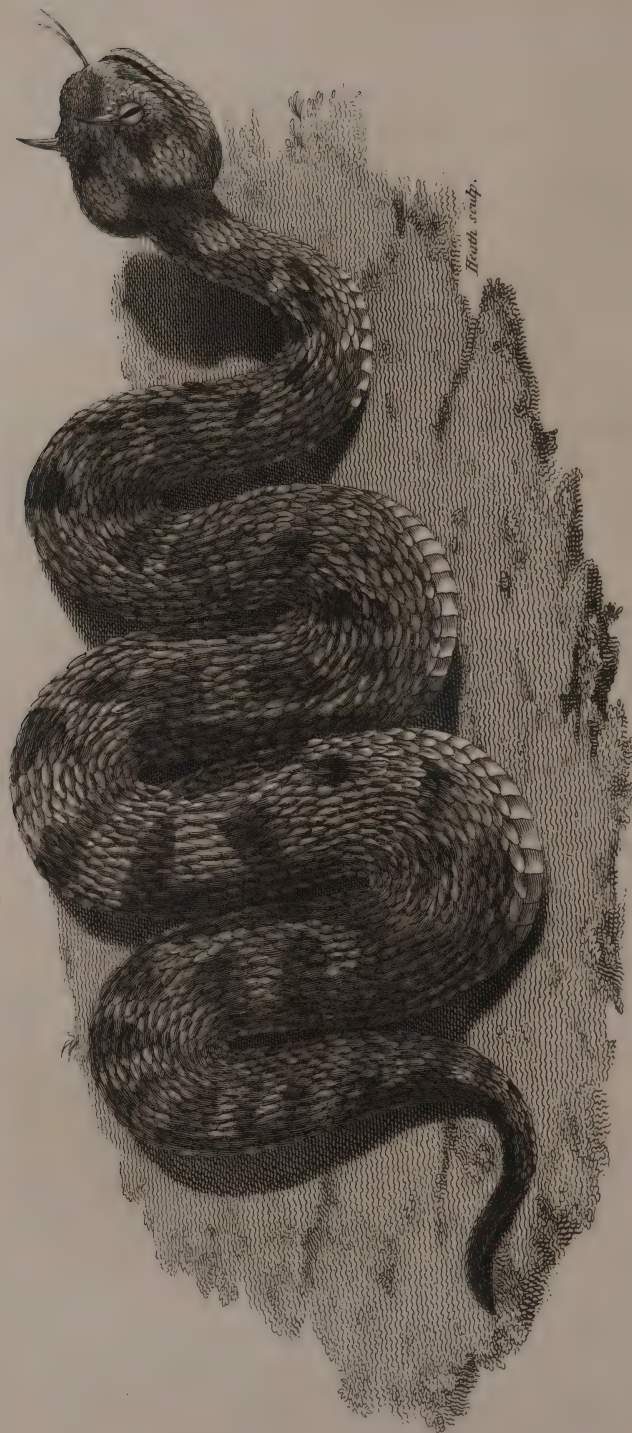
Coluber Lebetinus. C. griseus, serie quadruplici macularum transversarum; intermediis flavescens, lateralibus nigricantibus.

Grey Viper, with a quadruple series of transverse spots, the middle ones yellowish, the lateral dusky.

Coluber Lebetinus. Lin. Syst. Nat. p. 278.

Abdominal scuta 155, subcaudal squamæ 46.

THIS is a Viper of considerable size, measuring, according to Forskal, near a cubit in length, and being of a very thick form towards the middle: the head is large, broad, depressed, and subcor-date: the neck rather slender: the tail about four inches long: the scales on the head small, and those on the other parts larger, ovate-obtuse, flat, and carinated: the back is deflected considerably on each side: colour grey: with four series of alternate transverse spots, those of the middle series yellowish, and those of the lateral blackish: the under parts pale or whitish, pretty thickly freckled with dusky specks. This snake is a native of Greece and the Grecian islands, as Cyprus, &c. where it is called by the name of *Kufi* (Κῦφι), or deaf snake. Its bite is said by Forskal to prove fatal, producing insuperable somnolency. By the more learned, in those regions, it is termed *Aspis*, and Forskal supposes it to have been the *Aspis* of the ancients. It is said to be often found in corn fields during the harvest season, and is much dreaded by the Grecian reapers.



CERASTES.

SCYTHIAN VIPER.

Coluber Scythæ. *C. supra nigerrimus, subtus albus.*

Coal-black Viper, white beneath.

Coluber Scythæ. *Lin. Syst. Nat. Gmel. p. 1091.*

Abdominal scuta 153, subcaudal squamæ 31.

NATIVE of the woods of Siberia; observed by Dr. Pallas, who informs us that it grows to the length of half a foot or more, and is of the thickness of a finger: colour a very deep black above, but white and glossy beneath: head subcordate; tail about one tenth of the whole length: poisonous, but not dangerously so.

CERASTES.

Coluber Cerastes. *C. subferrugineus, maculis distantibus subovatis subtransversis fuscis, palpebris cornutis.*

Subferruginous Snake, with distant subovate subtransverse brown spots, and horned eyelids.

Coluber Cerastes. *Lin. Syst. Nat. p. 376.*

Cerastes ex Lybia. *Aldr. Serp. p. 175.*

Cerastes. *Bruce's Travels, appendix.*

Abdominal plates 150, subcaudal scales 25 pair.

THE Cerastes or Horned Viper, which commonly grows to the length of about a foot or fifteen inches, and sometimes to a larger size*, is distinguished by a pair of horns or curved pro-

* The specimens described by Cope measured more than two feet, as does also that in the British Museum.

cesses, situated above the eyes, and pointing forwards: these horns have nothing analogous in their structure to the horns of quadrupeds, and are by no means to be considered in the light of either offensive or defensive weapons: they increase, however, the natural antipathy so generally felt against the serpent tribe, and give the animal a more than ordinary appearance of malignity. The Cerastes is a native of many parts of Africa, and is principally found in sandy deserts and dry places. Its usual colour is a pale yellowish or reddish brown, with a few rather large, distant, round, or transversely oblong spots of a deeper colour dispersed along the upper parts of the body, the belly or under part being of a pale lead colour. In Syria and Arabia the Cerastes is particularly frequent, and is also found in many parts of Egypt, &c. It bears a very great affinity to the common Viper, and its bite is perhaps still more to be dreaded, since, exclusive of the general danger of treading accidentally on this reptile, and thus irritating it unawares, it is said to possess a propensity of springing with great suddenness to a considerable distance, and assailing without provocation those who happen to approach it.

The general history and manners of this serpent are amply detailed by Mr. Bruce, who, in the course of his travels, had frequent opportunities of contemplating it in its native regions.

“The Cerastes,” says Mr. Bruce, “inhabits the greatest part of the Eastern Continent, espe-

cially the desert sandy part of it. It abounds in the three Arabias, and in Africa. I never saw so many of them as in the Cyrenaicum, where the Jerboa is frequent in proportion. He is a great lover of heat; for though the sun was burning hot all day, when we made a fire at night, by digging a hole, and burning wood to charcoal in it, for dressing our victuals, it was seldom we had fewer than half a dozen of these vipers, who burnt themselves to death by approaching the embers. The general size of the Cerastes, from the extremity of its snout to the end of the tail, is from thirteen to fourteen inches: its head is triangular, very flat, but higher near where it joins the neck than towards the nose: the length of its head, from the point of the nose to the joining of the neck, is ten twelfths of an inch, and the breadth nine twelfths: between its horns is three twelfths: the opening of its mouth, or rictus oris, is eight twelfths: its horns in length three twelfths: its large canine teeth something more than three twelfths and a half: its neck, at the joining of the head, four twelfths: the body, where thickest, ten twelfths: its tail, at the joining of the body, two twelfths and a half: the tip of the tail one twelfth: the length of the tail one inch and three twelfths: the aperture of the eye two twelfths, but this varies, apparently according to the impression of light. The Cerastes has sixteen small, immoveable teeth, hollow, crooked, inwards, and of a remarkably fine polish, white in colour, inclining to blueish: near one fourth of the bottom is

strongly fixed in the upper jaw, and folds back like a clasp knife, the point inclining inwards, and the greatest part of the tooth is covered with a green, soft membrane, not drawn tight, but as it were wrinkled over it: immediately above this is a slit along the back of the tooth, which ends nearly in the middle of it, where the tooth curves inwardly. From this aperture I apprehend that it sheds its poison, not from the point, where, with the best glasses, I could never perceive an aperture, so that the tooth is not a tube, but hollow only half way; the point being for making the incision, and by its pressure occasioning the venom in the bag at the bottom of the fang, to rise in the tooth, and spill itself through the slit into the wound. By this flat position of the tooth along the jaw, and its being defended by the membrane, it eats in perfect safety; for the tooth cannot press the bag of poison at the root while it lies in this position, nor can it rise in the tube to spill itself, nor can the tooth make any wound, so as to receive it; but the animal is supposed to eat but seldom, or only when it is with young. This viper has only one row of teeth; none but the canine are noxious. The poison is very copious for so small a creature, it is fully as large as a drop of laudanum dropt from a vial by a careful hand. Viewed through a glass, it appears not perfectly transparent or pellucid. I should imagine it hath other reservoirs than the bag under the tooth, for I compelled it to scratch eighteen pigeons upon the thigh as quickly as possible, and they all died nearly

in the same interval of time ; but I confess the danger attending the dissection of the head of this creature made me so cautious, that any observation I should make upon these parts would be less to be depended upon."

" People have doubted whether or not this yellow liquor is the poison, and the reason has been, that animals who had tasted it, did not die as when bitten, but this reason does not hold good in modern physics. We know why the saliva of a mad dog has been given to animals, and has not affected them ; and a German physician was bold enough to distil the pus or putrid matter flowing from the ulcer of a person infected by the plague, and taste it afterwards, without bad consequences ; so that it is clear the poison has no activity till through some sore or wound it is admitted into the circulation. Again, the tooth itself, divested of that poison, has as little effect. The viper deprived of his canine teeth, an operation very easily performed, bites, without any fatal consequence, with the others ; and many instances there have been of mad dogs having bit people cloathed in coarse woollen stuff, which had so far cleaned the teeth of the saliva in passing through it, as not to have left the smallest inflammation after the wound."

" The Cerastes is mentioned by name in Lucan, and without warranting the separate existence of any of the rest, I can see several that are but the Cerastes under another term : the Thebanus Ophites, the Ammodytes, the torrida Dipsas, and

the Prester, all of them are but this viper, described from the form of its parts or colours*. Cato must have been marching in the night when he met this army of serpents: the Cerastes hides itself all day in holes in the sand, where it lives in contiguous and similar houses to those of the Jerboa; and I have already said, that I never but once found any animal in this viper's belly, but one Jerboa in a gravid female Cerastes."

"I kept two of these last-mentioned creatures in a glass jar, such as is used for keeping sweetmeats in, for two years, without having given them any food: they did not sleep, that I observed, in winter, but cast their skins the last days of April. The Cerastes moves with great rapidity, and in all directions, forward, backward, and sideways. When he inclines to surprise any one, who is too far from him, he creeps with his side towards the person, and his head averted, till judging his distance, he turns round, springs upon him, and fastens upon the part next to him; for it is not true what is said, that the Cerastes does not leap or spring. I saw one of them at Cairo, in the house of Julian and Rosa, crawl up the side of a box, in which there were many, and there lie still as if hiding himself, till one of the people who brought them to us, came near him, and though in a very disadvantageous posture, sticking, as it were, perpendicular to the side of the box, he leaped near the distance of three feet, and

* Luc. lib. 9.

fastened between the man's fore-finger and thumb, so as to bring the blood. The fellow shewed no sign of either pain or fear, and we kept him with us full four hours, without his applying any sort of remedy, or his seeming inclined so to do. To make myself assured that the animal was in its perfect state, I made the man hold him by the neck, so as to force him to open his mouth, and lacerate the thigh of a pelican, a bird I had tamed, as big as a swan. The bird died in about thirteen minutes, though it was apparently affected in fifty seconds; and we cannot think this was a fair trial, because, a very few minutes before, it had bit the man, and so discharged part of its virus, and it was made to scratch the pelican by force, without any irritation or action of its own."

"I apprehend this to be the Aspic, which Cleopatra employed to procure her death. Alexandria, plentifully supplied by water, must then have had fruit of all kinds in its gardens: the baskets of figs must have come from thence, and the Aspic or Cerastes that was hid in them, from the adjoining desert, where they are plenty to this day; for to the westward in Egypt, where the Nile overflows, there is no sort of serpents whatever that ever I saw, nor, as I have before said, is there any other of the mortal kind that I know, in those parts of Africa adjoining to Egypt, excepting the Cerastes. It should seem very natural for any one, who, from motives of distress, has resolved to put a period to his existence, especially women, and weak persons, unaccustomed to handle arms, to seek

the gentlest method to free themselves from the load of life now become insupportable. This, however, has not always been the case with the ancients. Arria, Poetus's wife, stabbed herself with a dagger, to set her husband an example to die, with this memorable assurance, after giving herself the blow, *Poetus, it is not painful!* Porcia, the wife of Brutus, died by the barbarous, and not obvious way of perishing, by swallowing fire; the violent agitation of spirits prevailing over the momentary difference in the suffering. It is not to be doubted but that a woman, high-spirited like Cleopatra, was also above the momentary differences in feeling; and had the way in which she died not been ordinary and usual, she certainly would not have applied herself to the invention of a new one. We are therefore to look upon her dying by the bite of the Cerastes as only following the manner of death which she had seen adopted by those who intended to die without torment. Galen, speaking of the Aspic in the great city of Alexandria, says, I have seen how speedily they (the Aspicks) occasioned death. Whenever any person is condemned to die whom they wish to end quickly and without torment, they put the viper to his breast, and suffering him there to creep a little, the man is presently killed. Pausanias speaks of particular serpents that were to be found in Arabia, among the balsam-trees, several of which I procured, both alive and dead, when I brought the tree from Beder Hunein; but they were still the same species of

serpent, only some from sex, and some from want of age, had not the horns, though in every other respect they could not be mistaken. Ibn Sina, called by the Europeans Avicenna, has described this animal very exactly. He says it is frequent in Schem (that is, the country about the south of Damascus), and also in Egypt; and he makes a very good observation on their manners; that they do not go or walk straight, but by contracting themselves; but in the latter part of his description he seems not to have known the serpent he is speaking of, because he says its bite is cured in the same manner as that of the Viper and Cerastes, by which it is implied that the animal he was describing was not a Cerastes, and the Cerastes is not a Viper, both of which assertions are false."

"A long dissertation," adds Mr. Bruce, "would remain on the incantation of serpents. There is no doubt of its reality: the Scriptures are full of it: all that have been in Egypt have seen as many different instances as they chose. Some have doubted that it was a trick, and that the animals so handled, had been first trained, and then disarmed of their power of hurting; and, fond of the discovery, they have rested themselves upon it, without experiment, in the face of all antiquity. But I will not hesitate to aver, that I have seen at Cairo (and this may be seen daily, without trouble or expence), a man who came from above the Catacombs, where the pits of the mummy birds are kept, who has taken a Cerastes with his naked hand, from a number of others lying at the bottom

of the tub, has put it upon his bare head, covered it with the common red cap he wears, then taken it out, put it in his breast, and tied it about his neck like a necklace; after which it has been applied to a hen, and bit it, which has died in a few minutes; and, to complete the experiment, the man has taken it by the neck, and, beginning at the tail, has ate it, as one would do a carrot or a stock of celery, without any seeming repugnance."

"We know from history, that where any country has been remarkably infested with serpents, there the people have been screened by this secret. The Psylli and Marmarides of old undoubtedly were defended in this manner."

Ad quorum cantus mites jacuere Carastæ*.

Sil. Ital. lib. 3.

"To leave ancient history, I can myself avouch, that all the black people in the kingdom of Sennaar, whether Funge or Nuba, are perfectly armed against the bite of either scorpion or viper. They take the Cerastes in their hands at all times, put them in their bosoms, and throw them at one another as children do apples or balls, without having irritated them by this usage so much as to bite. The Arabs have not this secret naturally, but from their infancy they acquire an exemption from the mortal consequences attending the bite of these animals, by chewing a certain root, and

* Tame at whose spell the charm'd Cerastes lay.

washing themselves (it is not anointing) with an infusion of certain plants in water. One day, when I was sitting with the brother of Shekh Adelan, prime minister of Sennaar, a slave of his brought a Cerastes, which he had just taken out of a hole, and was using with every sort of familiarity. I told him my suspicion that the teeth had been drawn, but he assured me they were not, as did his master Kitton, who took it from him, wound it round his arm, and at my desire ordered the servant to carry it home with me. I took a chicken by the neck, and made it flutter before him; his seeming indifference left him, and he bit it with great signs of anger: the chicken died almost immediately*: I say his seeming indifference, for I constantly observed, that, however lively the viper was before, yet upon being seized by any of these barbarians, he seemed as if taken with sickness, and feebleness, frequently shut his eyes, and never turned his mouth towards the arm of the person that held him. I asked Kitton how they came to be exempted from this mischief? He said they were born so, and so said the grave and respectable men among them. Many of the lighter and lower sort talked of enchantments by words and by writing, but they all knew how to prepare any person by medicines, which were decoctions of herbs and roots. I have seen many thus armed for a season, do pretty much the same

* Might not this have happened from the tooth piercing the spinal marrow; and would not the same effect have happened, had the chicken been pierced with a pin?

feats as those who possessed the exemption naturally: the drugs were given me, and I several times armed myself, as I thought, resolved to try the experiment; but my heart always failed me when I came to the trial; because among these wretched people it was a pretence they might very probably have sheltered themselves under, that I was a Christian, and that therefore it had no effect upon me. I have still remaining by me a small quantity of this root, but never had an opportunity of trying the experiment."

The Cerastes often makes its appearance among the numerous hieroglyphic figures on the various remains of Egyptian antiquity; and is particularly conspicuous on a pair of large sculptured stones brought from Alexandria, and preserved in the British Museum, and which, probably, made a part of the cornice of some magnificent temple.

This animal, like some other poisonous serpents, is supposed to be viviparous.

The admirable figure of the Cerastes, in the Appendix to Mr. Bruce's Travels, is deserving of the highest commendation, and infinitely surpasses every prior representation of the animal. It is, therefore, on account of its superior merit, selected for the present publication.



Rhinoc. n. serp.

HORN-NOSE SNAKE.

Coluber Nasicornis. *C. subolivaceo-flavescens nigro variatus, fascia laterali flexuosa pallida, naso bicorni.*

Subolivaceo-flavescient Snake, with black variegations, pale flexuous lateral band, and two-horned snout.

Coluber Nasicornis. *C. subolivaceo-ferrugineus, nigro irroratus maculis dorsalibus pallidis nigro circumscriptis, fascia laterali undulata pallida.*

Olive-brown Snake, freckled with blackish, with a row of pale dorsal spots surrounded by black, and a flexuous pale fascia on the sides. *Naturalist's Miscellany, pl. 94.*

Abdominal plates 127, subcaudal scales 32 pair.

THIS highly remarkable Snake was first published in the Naturalist's Miscellany, and was, prior to the period of its introduction into that work, a perfectly new and undescribed species. I shall therefore repeat, with very slight variations, my former description.

The Snake here represented, adds to the number of those malignant reptiles whose bite, in the hotter regions of the globe, proves the dreadful forerunner of a speedy and painful death. If at the first glance of most of the serpent tribe an involuntary sort of horror and alarm is so often felt by those who are unaccustomed to the examination of these animals, how much greater dread must the unexpected view of the species here exhibited be supposed to inflict? when to the general form of the creature is superadded the peculiar fierceness and forbidding torvity with which Nature has marked its countenance; distinguished

by the very uncommon appearance of two large and sharp-pointed horns, situated, not as in the *Cerastes*, above the eyes, but on the top of the nose or anterior part of the upper jaw. These horns stand nearly upright, but incline slightly backwards and a little outwards on each side, and are of a substance not absolutely horny, but in some degree flexible: their shape is somewhat triangular or three-sided: they are about half an inch in length, and at the fore part of the base of each stands an upright strong scale, of nearly the same shape with the horn itself, and thus giving the appearance of a much smaller pair of horns*. The mouth is furnished with extremely large and long fangs or tubular teeth, situated as in other poisonous serpents, and capable of inflicting the most severe wounds: two of these fangs appear on each side of the mouth; the hinder pair being smaller than the others. The length of this animal is about thirty-five inches. Its colour is a yellowish olive-brown, very thickly sprinkled all over with minute blackish specks: along the whole length of the back is placed a series of yellowish-brown oblong spots or marks, each of which is imbedded in a patch of black; and on each side of the body, from head to tail, runs an acutely-flexuous or zigzag line or

* It is remarkable that some of the older writers † speak of a kind of *Cerastes* with four horns, or even more: it is, therefore, not improbable that this species might have been seen by those authors.

† *Salinus, Albertus, &c.*

narrow band of an ochre-colour: this band is bounded beneath by a much deeper or blacker shade, than on the rest of the body: the belly is of a dull ochre-colour or cinereous yellow, freckled with blackish spots and markings; and besides these a number of black spots of different sizes are here and there dispersed over the whole animal. The tail is somewhat thin and short in proportion to the body. The scales of this species are harsh and stiff, and are very strongly carinated. The head is covered with small scales, and is marked on its upper part by a very large longitudinal patch of brown, running out into pointed processes at the sides, and bounded by a space of dull lead-colour or cinereous. The shape of the head is broad and flattened: the cheeks are varied with blackish and yellow marks.

The animal seems to have been taken at a period not far distant from that of casting its skin; since the exterior scales separate easily from the subjacent ones, which then appear of a clearer and lighter colour than before, the yellowish variegations on the sides approaching almost to whiteness, with dusky spots and marks.

This Snake exhibits a richness and magnificence in the pattern of its robe, which cannot be viewed without admiration, though the colours separately considered are far from brilliant; and, like those on the plumage of the Wryneck, produce their effect from the curious manner in which they are disposed and blended.

The Horn-Nose Snake is supposed to be a native of the interior parts of Africa. The specimen was obtained from the master of a Guinea vessel by the Rev. Edward Charles Jenkins, of Charles-Town, in South Carolina, by whom it was presented to the British Museum.

CROTALINE SNAKE.

Coluber Crotalinus. *C. cinereus, supra maculis magnis nigricantibus alternis, subtus flavescens fusco irroratus.*

Cinereus Snake, marked above with large alternate blackish spots; beneath yellow, freckled with brown.

Coluber Crotalinus. *Lin. Syst. Nat. Gmel. p. 1094.*

Abdominal scuta 154, subcaudal scuta 43.

THIS, says Linnæus, is a large species, with the habit of a Rattle-Snake: colour cinereous, marked above with large, alternate, blackish spots; the under parts yellowish, freckled with brown: head cordate, eyelids protuberant; tail about one seventh of the length of the body, and furnished with scutella as in other Colubri. A specimen of this Snake, in the British Museum, is about the size of the Boa Canina: the head is broad, and obtusely trigonal; the scales are carinated, and the body seems to have been banded with brown, but the specimen being much faded, the disposition of its colours cannot be very exactly determined. The number of abdominal scuta in this specimen is 150, and of subcaudal squamæ 40.

CLOTHO.

Coluber Clotho. *C. griseo-luteus, fasciis numerosis undulatis transversis nigris, subtus cinereus nigro variatus.*

Greyish-orange Snake, with numerous transverse undulated black bands, beneath ash-coloured, with black variegations.

Vipera Bitin Ceilonica elegantissima. *Seb. 2. t. 93.*

THIS appears from Seba's description and figure to be a large and richly variegated species, measuring more than six feet in length: and being pretty thick in proportion: the head is large, covered with small scales, and scarce distinguished from the body by any perceptible neck: the colour of the upper parts is a strong orange-brown, freckled with black specks, one at the tip of each scale, and marked with numerous transverse zig-zag bars of black; while about the sides are several scattered black spots of different forms and sizes: the under parts are cinereous, barred here and there by narrow transverse black stripes: the tail of moderate length, thinner than the body, and gradually tapers to the extremity. This snake is a native of Ceylon, and is supposed to be a poisonous species.

LACHESIS.

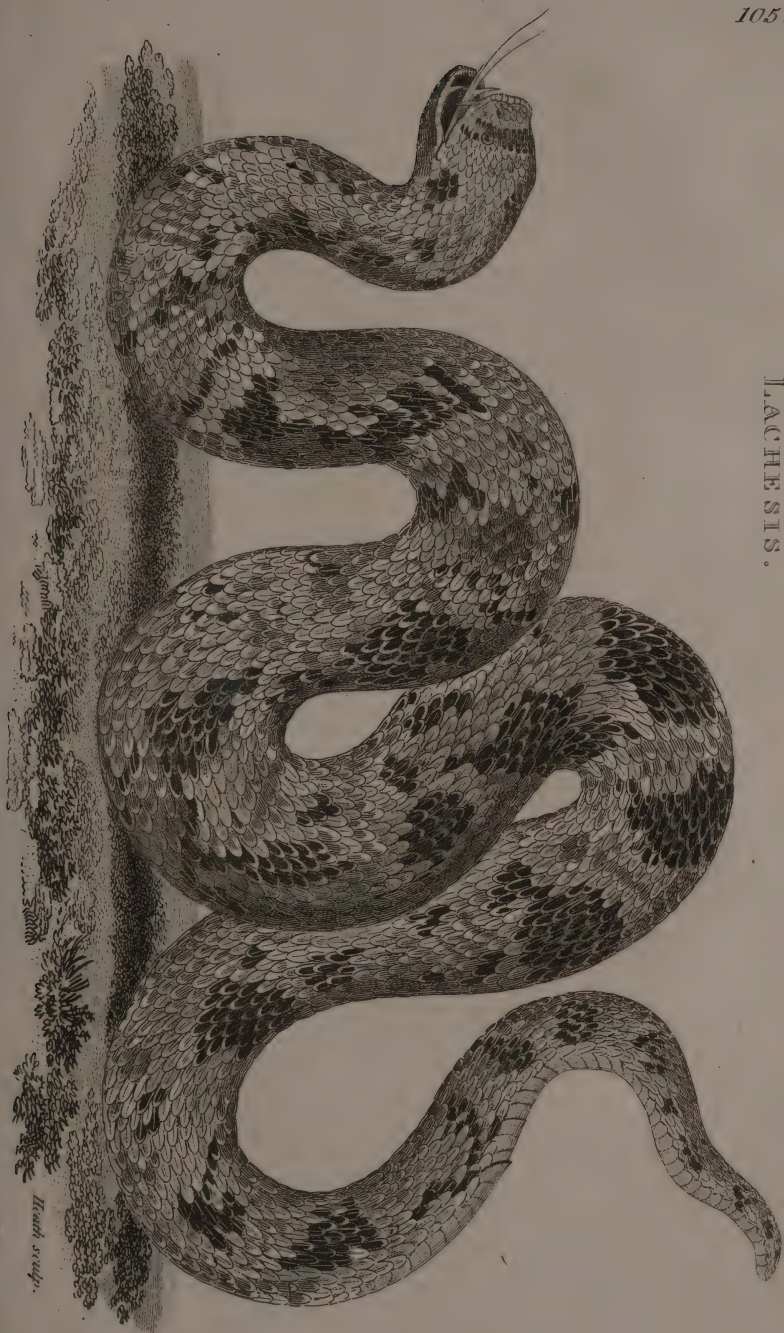
Coluber Lachesis. *C. griseo-flavescens, fusco variatus, squamis laxis carinatis, capite indistincto, cauda brevi.*

Yellowish-grey Snake, variegated with brown, with loose carinated scales, indistinct head, and short tail.

Serpens Ceilonica *Bitin* dicta. *Seb. 2. t. 94. f. 2.*

THIS remarkable snake is figured and slightly described by Seba, who informs us that it is a native of the island of Ceylon, where it is known by the name of *Bitin*. Its colour is a rich and somewhat irregular variegation of deep and light brown, disposed in the form of streaks and patches on a yellowish-grey ground: the scales, which in many parts are tipped with white, are large, strongly carinated, and fixed only at the base, while the remainder is loose or free: in consequence of this disposition of the scales, the animal, while moving, is said to make a kind of rustling sound, by elevating and depressing them, and even sometimes shaking off such as happen to be in any degree loose: the scuta or under scales are broad, of a pale colour, and marked by numerous, small, irregular, dusky, or blackish spots. It is a poisonous species, being armed with large fangs, and, from its general form and proportions, appears to be an animal of very considerable strength: the head is not distinguished in size from the body by any appearance of neck or contraction: the male is deeper coloured than the female, and seems to have a larger body and

LACHESIS.

*Heath sculp.*



LACHESIS var. ?

a more slender tail. The general length of this snake seems to be about four or five feet, and the tail is short in proportion to the body. It does not appear to have been known to Linnæus, who, relying on his specific characters taken from the number of scuta and squamæ, seems to have neglected almost every species, however remarkable, described or figured by other authors, where those particulars could not be ascertained.

VAR. ?

Seb. 2. t. 30.

THIS is probably a variety of the preceding, from which it differs in being of a somewhat shorter form in proportion, with the tail remarkably short, thick, and suddenly tapering to an obtuse point. Its variegations are very nearly similar to those of the former.

There can be no occasion to warn the scientific reader, that as the two preceding species are described merely from their general appearance, the specific characters annexed must, of course, be received with some degree of latitude.

ATROPOS.

Coluber Atropos. *C. canus maculis rotundis magnis fuscis albo marginatis in serie quadruplici dispositis.*

Grey Snake, with a quadruple series of large round brown spots with white margins.

Coluber Atropos. *Lin. Syst. Nat. p. 275.*

Abdominal scuta 131, subcaudal squamæ 22.

THIS is a species of a thick and short form, scarcely exceeding fifteen or sixteen inches in length: the head is large and viperine, marked with four or five large dusky spots, and covered with small scales: the remainder of the animal is pale brown, marked all along the upper part by four* rows of very large, alternate, round, black spots bordered with white: the abdomen is ash-coloured: the tail very short, measuring about a ninth part of the whole length: the scales on all the upper parts are of a slightly sharpened form, and carinated. It is a native of America, and is considered as an extremely poisonous serpent. From its remarkable pattern, and the size of its spots, it is a species very easily distinguished.

* In a beautiful specimen in the Leverian Museum there seem to be only three rows of spots.

ALECTO.

Coluber Alecto. *C. albidus, dorso maculis reticulatis rhombeatis fuscis, capite cordato ferrugineo, stria laterali nigra.*

Whitish Snake, with reticular rhomboid brown spots along the back, and cordated ferruginous head with a black lateral stripe.

Coluber Ceilonicus, longissimus, perniciosus, torvus Ammodytes dictus. *Seb. 2. p. 79. t. 76. f. 1.*

A LARGE snake: length about five feet and a half: habit rather slender than thick: head very large, flattish, cordated at the back part, of a pale ferruginous colour speckled with black, and marked on each side by a descending black streak from the eye to the hind-head: remainder of the animal very pale or whitish grey, marked throughout the whole length of the back by a series of large, transverse, rhomboid, reticular patches of brown, the points of which descend on the sides so as almost to reach the abdominal scuta: tail rather short, gradually tapering, and terminating in a horny pointed extremity. Native of Ceylon: said to be a poisonous species.

VAR. ?

SEBA figures a much smaller snake, of about three feet long, white, with a tinge of blossom-colour, and marked above as in the former, of which it may, perhaps, be a younger specimen; the differences being not so great as entirely to

forbid this supposition. It is said to be a native of Africa. See Seb. 2. pl. 82. f. 2.

TISIPHONE.

Coluber Tisiphone. *C. fuscus immaculatus, corpore crasso,*

Brown thick-bodied Snake, without any variegations.

Brown Viper. *Catesb. Carol. 2. pl. 45.*

THIS, says Catesby, is of the size of the Black Viper (American), measuring about two feet in length, and large in proportion: it is also a very slow-moving and sluggish reptile, advancing deliberately, even to escape danger: yet will defend itself with much fierceness when attacked, and its bite is said to be as venomous as any: it retains its brown colour, in all stages of life: it is found in Virginia, and Carolina, in the last of which it is called the Truncheon Snake: it preys on Lizards and other animals.

MEGAERA.

Coluber Megæra. *C. fuscus, flavo variatus, capite cordato depresso, foramine utrinque magno inter oculos & nares.*

Brown Snake, with yellow variegations, flat cordate head, and a large orifice on each side between the eyes and nostrils.

La Vipere Fer-de-Lance. *Cepede Serp. p. 121. pl. 5.*

Abdominal scuta 224, subcaudal squamæ 68.

THIS is a large species, measuring, when full-grown, five or six feet, or even more, in length.

It is a native of the island of Martinico, and some of the neighbouring islands, and may justly be considered as one of the most formidable of the Transatlantic Serpents. The Count de Cépède very properly observes, that the name of Yellow Martinico Snake, by which it is generally called in the works of voyagers, is highly improper, since yellow is often not the predominating colour: that of a fine specimen in the British Museum is a rich deep brown, with yellow variegations; the back being marked throughout the whole length of the animal by pretty numerous, equidistant, broken, and slightly alternating bars of dull yellow, which, descending and joining at intervals with the neighbouring ones, form obscurely annular and somewhat irregular markings of similar colour along the sides, with still more obscure crossings on the part nearest the scuta, intermixed with smaller patches and spots: the abdomen is dull yellow, clouded and speckled on the sides with pale brown: the head is large, flat, cordate, and covered with very small carinated scales; but the terminal scale of the nose, and those at the sides of the mouth, are very large: above each eye is also a very large scale: the nostrils are small, and between them and the eyes on each side is a large orifice, the use of which is perhaps not distinctly understood, but which has been regarded as a passage to the organ of hearing: the scales on the whole upper parts of the body are moderately large, ovate, and carinated, the back slightly elevated, the sides rather sloping,

and the abdomen flattish: the total length of the individual now described, in the British Museum, is something more than five feet, the body being of moderate thickness in proportion: the tail measures eight inches, and gradually tapers to the extremity, which is terminated by a small callous or horny point of about the eighth of an inch in length.

That this is a most formidable serpent, appears from the large size of the fangs, which are of the usual curved form, and measure near three quarters of an inch in length. The poison is said to resemble in appearance that of most other serpents, being a clear yellowish fluid, like olive oil: the symptoms produced by the bite are such as follow from that of the Viper, but in a much stronger degree: when preparing to bite it is said to throw itself into a spiral form, and to spring with great rapidity on its victim; but at other times to be rather slow of motion, and of a torpid or indolent nature, concealing itself beneath various vegetables, or within the hollows of trees, &c. and even sometimes in cavities under ground: it is said to frequent sugar plantations, for the sake of the rats, which abound in such situations; it also preys on birds, &c. the female is reported to go six months with young, which she produces in the months of August and September, perfectly formed, like those of the Viper, and very numerous, amounting to twenty, forty, and even, according to some accounts, as many as sixty: they are observed to vary in colour, some of the same

*M. S. S.*

SPECTACLE SNAKE.

brood being yellow, others grey, and others of mixed colours: it is probable, however, that the colour of the full-grown animal is always similar to that of the individual above described.

The Count de Cepede, in his History of Serpents, gives this species the title of *Fer de Lance*, from a fancied resemblance between the shape of the flat subtriangular space on the middle of the head to that of a spear-head or halbert. The number of scuta in the small specimen described by that author was 228, and of subcaudal squamæ 61 pair. In the British Museum specimen above-described, the number of the former is 224, and of the latter 68.

SPECTACLE SNAKE.

Coluber Naja. *C. ferrugineo-flavescens, collo supra macula magna conspicillata albo nigroque varia notato.*

Ferruginous-yellow Snake, with the neck marked above by a large black and white spectacle-shaped spot.

Coluber Naja. *Lin. Syst. Nat. p. 382.*

Serpens Malabarica Cobra de Capello dicta. *Seb. 2. t. 94. f. 2.*

Serpens Indicus Noja dictus, &c. *Seb. 2. t. 97.*

Abdominal scuta 193, subcaudal squamæ 60.

THE Coluber Naja, or Cobra de Capello, is a native of India, where it appears to be one of the most common, as well as most noxious, of the Serpent tribe; very frequently proving fatal, in the space of a few minutes, to those who unfortunately experience its bite. Its remarkable form

and colours are such as to distinguish it with great ease from almost every other snake. Its general length seems to be three or four feet, and the diameter of the body about an inch and quarter: the head is rather small than large, and is covered on the fore part with large smooth scales; resembling, in this respect, the majority of innoxious serpents: the back part, sides, and neck, with smaller ovate scales; and the remainder of the animal, on the upper parts, with small, distinct, oblong-oval scales, not ill resembling the general form of a grain of rice. At a small distance beyond the head is a lateral swelling or dilatation of the skin, which is continued to the distance of about four inches downwards, where the outline gradually sinks into the cylindric form of the rest of the body. This part is extensile, at the pleasure of the animal; and when viewed from above, while in its most extended state, is of a somewhat cordated form, or wider at the upper than the lower part: it is marked above by a very large and conspicuous patch or spot, greatly resembling the figure of a pair of spectacles; the mark itself being white with black edges, and the middle of each of the rounded parts black. This mark is more or less distinct in different individuals, and also varies occasionally in size and form, and in some is even altogether wanting. The usual colour of the animal is a pale ferruginous brown above; the under parts being of a blueish white, sometimes slightly

tinged with pale brown, or yellow: the tail, which is of moderate length, tapers gradually, and terminates in a slender, sharp-pointed extremity.

This formidable reptile has obtained its Portuguese title of *Cobra de Capello* or *hooded snake* from the appearance which it presents when viewed in front in an irritated state, or when preparing to bite; at which time it bends the head rather downwards, and seems hooded, as it were, in some degree, by the expanded skin of the neck. In India it is every where exhibited publicly as a show, and is, of course, more universally known in that country than almost any other of the race of reptiles. It is carried about in a covered basket, and so managed by its proprietors as to assume, when exhibited, a kind of dancing motion; raising itself up on its lower part, and alternately moving its head and body from side to side for some minutes, to the sound of some musical instrument which is played during the time. The Indian jugglers, who thus exhibit the animal, first deprive it of its fangs, by which means they are secured from the danger of its bite.

Dr. Russel, in his account of experiments made in India with this serpent, observes, that, as a general standard for a comparison of the effect of its bite with that of other poisonous serpents, he never knew it prove mortal to a dog in less than twenty-seven minutes, and to a chicken in less than half a minute. Thus, fatal as it is, its poison seems not so speedy in operation as that of

the Rattle-Snake, which has been known to kill a dog in the space of two minutes.

In the month of June, 1787, a dog bitten by a Cobra de Capello on the inside of the thigh, howled at first, as if in severe pain: after two or three minutes he lay down, continuing to howl and moan: after twenty minutes he rose, but with much difficulty, being unable to walk, and his whole frame appeared greatly disordered. He soon lay down again, and in a few minutes was seized with convulsions, in which he expired, twenty-seven minutes after the bite.

A large and very stout dog was bitten by another Cobra de Capello on the inside of the thigh, which, in a minute or two, was drawn up, which is, in general, the first symptom of the poison having taken effect. He continued, however, nearly an hour longer, walking on the three remaining legs, seeming not otherwise disordered; but after this time, he laid himself along, in great inquietude, his head and throat being convulsed in an uncommon degree; he made several vain efforts to rise; his legs became both paralytic, and after continuing in this state near an hour, he expired.

Nov. 11th, a large dog was bitten by a Cobra de Capello which had been captive only two days. He complained a good deal at the instant of the bite, and the leg was drawn up soon. In twenty-five minutes he was seized with convulsions, succeeded by stupor, in which state he lay for ten minutes: the convulsions, however, returned, and

he expired in a quarter of an hour ; being fifty-six minutes after the bite.

Aug. 9th, a Cobra de Capello, which had lost his two longest fangs, but retained two of the second order, was made to bite a very large stout dog. At first the dog complained loudly, though without drawing up the thigh, or shewing any other symptom of poison : but, happening at this time to break loose, he was pursued, and, after a chase of an hour and a half, was brought back, much fatigued and heated. After resting a quarter of an hour, water was offered to him, which was refused, though he eat some morsels of bread thrown into it. About a quarter of an hour afterwards he became much disturbed, grew entirely outrageous, howling violently, snapping at and gnawing the stake to which he was tied with incredible ferocity. This continued about three hours, when, growing faint, his howlings grew weaker, his convulsions increased, and he expired in about four hours after the bite.

A pig, bitten by a snake of this kind, which had been kept for more than six weeks, and fed only once in seven days with milk, became greatly disordered in twenty minutes, and expired in less than an hour,

A chicken, bitten by a Cobra de Capello, has been sometimes known to survive two hours.

Aug. 17, 1788, an attempt was made to make a Cobra de Capello bite another (of the variety called *Nooni Paragoodo*) in the tail, but that part being found too small, the belly was bitten, a little

above the vent. The bitten snake soon lost its former activity, and, when put under a glass, coiled itself up. In this state it was left, and after an hour and a quarter was found dead. On opening the belly, the parts immediately beneath the bite appeared much inflamed, though it could not be discovered whether the fangs had penetrated into the cavity.

A Cobra de Capello, received by Dr. Russel from Ganjam, under the name of *Saltanag*, was made to bite another remarkably large Cobra, brought from the same place, under the name of *Coultiah*. The poison was shed on the place, but no marks of fangs could be perceived, and the *Coultiah* remained as well as before: this experiment was repeated with the same result, though a little blood as well as poison was found on the part bitten.

Some days after this, a Cobra de Capello (of the variety called *Coodum Nagoo*) was made to bite the *Coultiah* on the belly: both fangs visibly acted: blood appeared on the wound, but no other consequence followed. A *Tar Tutta*, bitten immediately after in the same manner, died within two hours.

Chickens and pigeons, bitten by a Cobra de Capello, whose fangs had been eradicated, suffered no symptoms of poison; but when poison, taken from the same snake, was inserted into their bodies, either by incision or puncture, they suffered the usual symptoms, and very often died.

The principal Indian varieties of this fatal snake are thus enumerated by Dr. Russel.

1. *Arege Nagoo*. With a pale central spot in the middle of each of the black spots of the spectacle-shaped mark.—*Abdominal scuta* 189, *subcaudal scales* 60.
2. *Coodum Nagoo*. This variety is darker than the others, and the skin of a yellower cast; but the principal distinction is in the spectacle-mark, which consists of an oblong curved frame without the usual black eyes or centre-spots of the others.—*Abdominal scuta* 187, *subcaudal scales* 57.
3. *Sankoo Nagoo*. The chief distinction of this is a plain hood, without any mark. This variety is supposed by Seba to be the female of the species; but Dr. Russel informs us that one which he brought home from India, and presented to Mr. John Hunter, was a male, and that the usual spectacle-shaped mark is found indifferently both on males and females. This variety is rarer than the rest.—*Abdominal scuta* 183, *subcaudal scales* 56.
4. *Mogla Nagoo*. The cervical scuta in this variety are spotted here and there with faint greyish spots, and four of the middle ones are entirely of a blueish grey.—*Abdominal scuta* 192, *subcaudal scales* 65.
5. *Malle Nagoo*. The colour of this variety is of a lighter brown than the rest, and the scuta whiter and less spotted, but seven of

- the pectoral ones are completely dark.—*Abdominal scuta* 191, *subcaudal scales* 62.
6. *Cumboo Nagoo*. In this some deviations were observable in the shape of the laminæ: all the cervical scuta were dusky, and the trunk had a strong blueish cast.—*Abdominal scuta* 186, *subcaudal squamæ* 60.
 7. *Jonna Nagoo*. The skin of the hood in this is tinged with orange colour; the scuta of the neck spotted with grey, and six of the lower ones wholly of a blue-grey.—*Abdominal scuta* 189, *subcaudal squamæ* 57.
 8. *Nella Tas Pam*. With the black on the hood unusually deep, and all the jugular scuta remarkably dusky.—*Abdominal scuta* 186, *subcaudal squamæ* 62.
 9. *Kistna Nagoo*. The middle lamina of the three between the eyes remarkably broad, and the posterior pair subovate instead of semi-cordate: five of the jugular scuta dusky, and six of the pectoral almost black.—*Abdominal scuta* 186, *subcaudal squamæ* 63.
 10. *Korie Nagoo*. The three laminæ between the eyes remarkably narrow; the large posterior pair oval; colour of the trunk, and still more of the scuta, unusually blueish.—*Abdominal scuta* 184, *subcaudal squamæ* 57.

AMERICAN VARIETIES?

IF Seba be in the right, either the Cobra de Capello, or a species nearly allied to it, occurs in some parts of South America. He describes and figures one from *Peru*, which, in its general aspect, resembles the Indian, but has the neck not apparently of greater diameter than the body: it is marked with the spectacular patch, as in that kind, the whole area of the hood being dusky or brown; and a collar of the same colour at a small distance beneath: the colour of the rest of the animal rufous grey, with slight whitish variegations. Another kind is from *Brasil*, and is represented as of smaller size than usual (perhaps a half-grown animal), and of a ferruginous colour, with several dusky bands round the upper part of the body: the hood or dilated part marked with a pale or blueish-grey spectacle mark, with two black spots on each limb, one above the other. These Snakes the Count de Ceppe is willing to consider as distinct species, under the titles of the *Peruvian* and *Brasilian* Naja. But perhaps Seba may have been mistaken in supposing them American.

Reflecting on these and other horrid natives of the hotter regions of the globe, we cannot but join in the sentiment of Linnæus, congratulating ourselves on our own happy state of security; and may well be willing to prefer the rigours of a northern winter, with a temporary loss of vegetation, to the

continued warmth of climate, and ever-blooming verdure which distinguish the beautiful regions of both the Indies, where, alas! the incautious traveller may meet with sudden fate in the midst of the most enchanting scenes which nature can display.

RUSSELIAN SNAKE.

Coluber Russelii. C. fusco-flavescens, maculis dorsalibus ovato-acuminatis nigricantibus albo marginatis, lateralibus minoribus ovatis.

Brownish-yellow Snake, with acutely-ovate blackish dorsal spots edged with white, and smaller ovate lateral ones.

Katuka Rekula Poda. *Russ. Ind. Serp. p. 10. pl. 7.*

Abdominal scuta 168, subcaudal squamæ 59.

THE length of this remarkable snake is about four feet: the colour an elegant pale yellowish brown, marked throughout the whole length of the back with a continued chain or series of large rhomboid, or rather oval, spots of deep brown, with paler middles, and narrow white edges: in some parts these spots are nearly confluent, as shewn in the figure: on each side of the body is a row of brown oval spots, smaller than those on the back; and, besides these, a few still smaller transverse marks are scattered here and there on the sides: the under part of the body is white, with a few dusky spots: the head is rather large; the snout obtuse; the mouth wide, the fangs large, and, as in several other poisonous serpents,



Hatch Sculp.

double; a smaller fang being situated close to the larger one on each side*.

Dr. Russel, in his work on Indian Serpents, informs us that this species is scarce less common in India than the Coluber Naja, or Cobra de Capello; but from its not being carried about like that and some other snakes as a public show, is not so universally known either among the natives or Europeans. Its bite, according to Dr. Russel's experiments, proved fatal to chickens in thirty-eight seconds, and to a dog in twenty-six minutes.

The particulars of the experiments made on this subject are as follows:

A chicken bitten in the pinion by a *Katuka Rekula Poda*, which had been caught two or three days before, and seemed in high spirits, was instantly infected, seized with convulsions, and expired in thirty-eight seconds.

Immediately after the chicken, a stout dog was bitten in the thigh. Within less than five minutes he appeared stupified; the thigh was drawn up, and he frequently moved it as if in pain. He remained, however, standing, and eat some bread that was offered to him. In about ten minutes the thigh became paralytic: in fifteen minutes he entirely lost the use of the wounded thigh, and lay down, howling in a dismal man-

* In most venomous serpents there are two or three, or even more, small fangs, situated near the large ones; as if to supply their place when lost.

ner, frequently licking the wound, and making, at intervals, ineffectual attempts to rise. In nineteen minutes, after a short cessation, he again began to howl; moaned often; his breathing became laborious, and the jaws were completely shut. The few succeeding minutes were passed alternately in agony and stupor; and in twenty-six minutes after the bite he expired.

A second dog, of much smaller size, was next bitten, and expired in the space of six hours.

A rabbit was next exposed to the bite, and died in less than an hour.

After this a chicken was bitten in the pinion, and expired in less than six minutes.

All the above experiments were made with the same snake in the course of the same morning. It appears, therefore, that this species must be numbered among the most poisonous of the whole tribe.

GRASS-GREEN SNAKE.

Coluber Gramineus. *C. viridis, subtus flavescens, abdominis margine viridi maculato.*

Green Snake, yellowish beneath, with the edges of the abdomen spotted with green.

Boodroo Pam. *Russel Ind. Serp. p. 13. pl. 9.*

Abdominal scuta 170, subcaudal scales 58 pair.

NEARLY allied, in general appearance, to the *C. mycterizans*, *nasutus*, and *purpurascens*, but having a larger head in proportion, and an ob-

tusely tapering, but by no means pointed, snout; the head is also covered on all parts by very small scales: colour of the whole upper parts fine grass green; of the under parts pale yellow, the edges of the abdomen marked by a row of faint green spots: length about two feet and a half; tail about five inches, gradually tapering to the extremity: native of India: described by Dr. Russel: a poisonous species: fangs remarkably long and slender. From Dr. Russel's experiments it appears that a chicken died, after having suffered strong convulsions, and afterwards stupor, in about eight minutes from the bite: pigs and dogs were seized with stupor, convulsions, &c. but in the space of a few hours recovered from the effect of the poison.

 SEVERE SNAKE.

Coluber Severus. *C. cinereus, fasciis obliquis linearibus albidis fusco marginatis.*

Cinereous Snake, with oblique linear whitish bands edged with brown.

Coluber Severus. *Lin. Syst. Nat. p. 379.*

Vipera Japonica literas inscripta. *Seb. 2. t. 54. f. 4. ?*

Abdominal scuta 170, subcaudal squamæ 42.

A RATHER small species, growing to the length of about a foot and half, and being of moderate thickness: head broad, obtuse, livid, with a cinereous band between the eyes and behind the nostrils: eyes large; neck thick; colour of the upper parts cinereous, with whitish, narrow, transverse

bands directed obliquely forwards, and slightly edged with brown: abdomen dusky; sides speckled with white: tail short. This species seems to vary in colour, since in the Gmelinian edition of the *Systema Naturæ* the abdomen is said to be whitish. The Seban figure quoted by Linnæus in the *Systema Naturæ*, is described by the author as of a pale rufous colour, with yellowish bands somewhat resembling Hebrew characters in form, and edged with brown: the abdomen pale yellow, with a row of blackish spots on each side.

BULL-HEADED SNAKE.

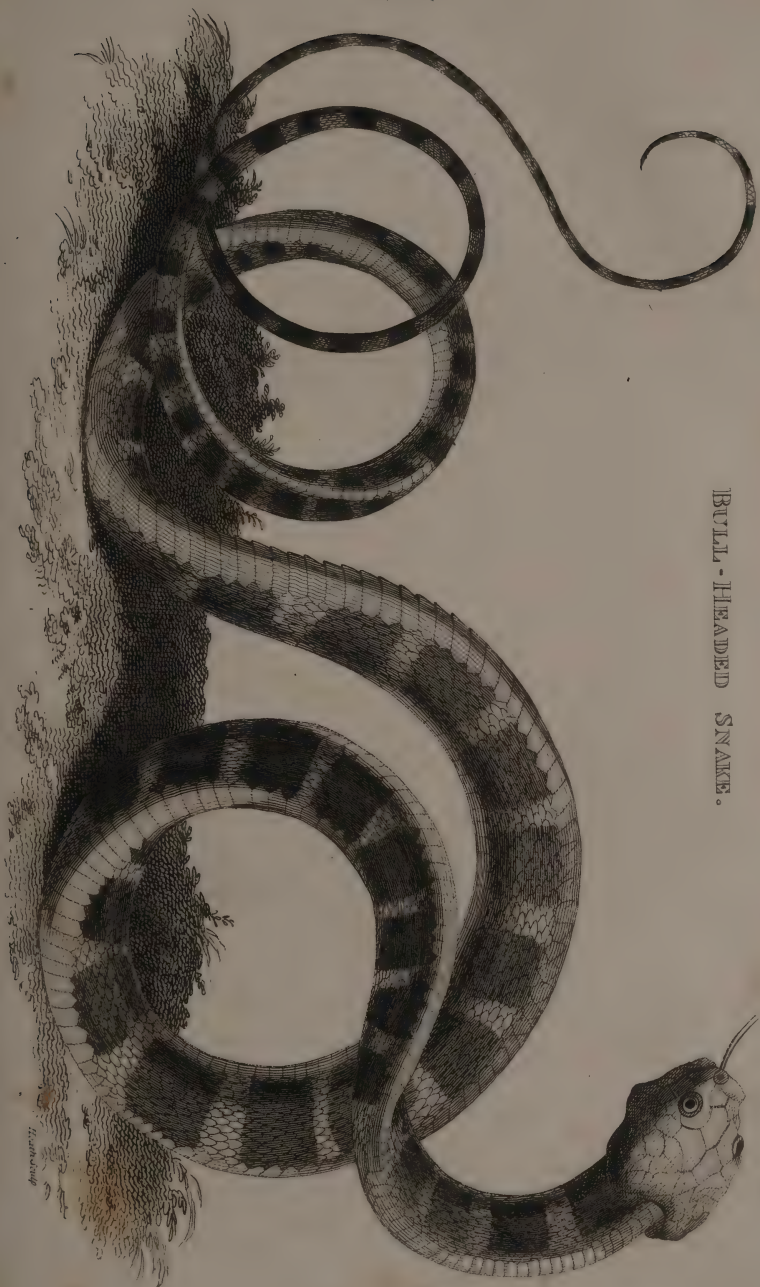
Coluber Bucephalus. C. subfuscus, albido transversim fasciatus, capite magno, cordato, depresso, corpore compresso, cauda tenuissima.

Brownish Snake, with transverse whitish bars, large cordated depressed head, compressed body, and very thin tail.

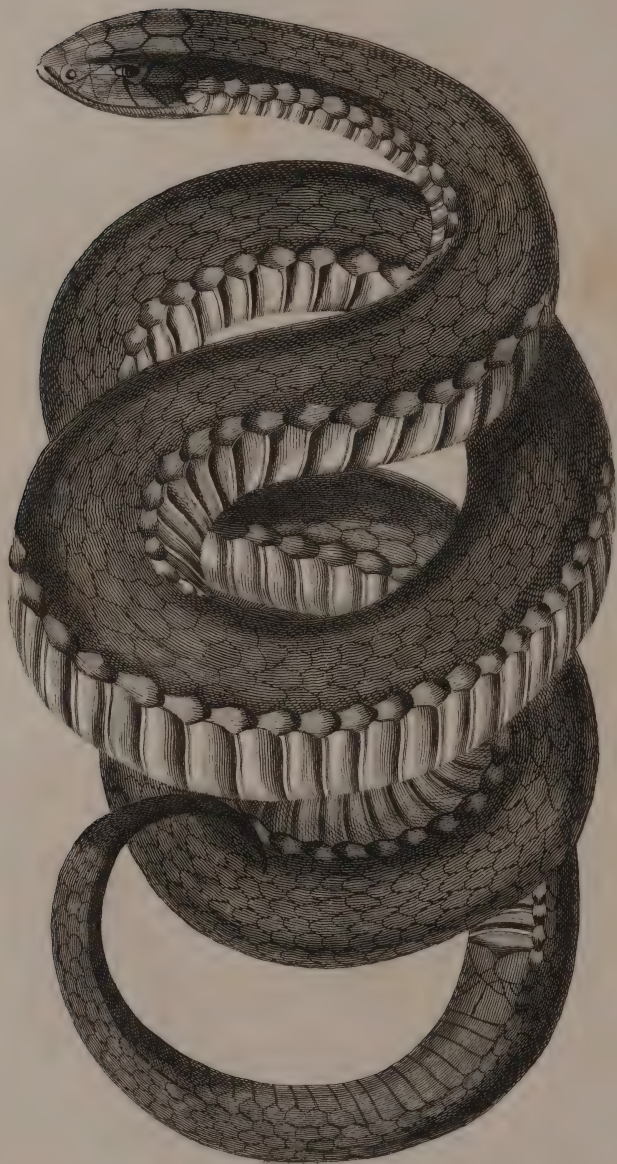
Serpens Lusitanis Cobra de Capello dicta. Seb. 1. t. 43. f. 4.

A VERY singular species: length about four feet and a half: head extremely large; depressed, cordate behind, and somewhat compressed on the sides of the mouth; covered above by very large scaly plates: at some distance from the eyes are two remarkable, oblong, brown spots: neck thin, and, together with the whole body, extremely compressed on the sides: tail long, round, and tapering to a fine point: from the head along the back runs a row of large, broad, hexagonal scales, those on the other parts being ovate: abdominal

BULL-HEADED SNAKE.



CRIMSON-SIDED SNAKE.



scuta very narrow: colour of the whole animal rufous brown, with moderately distant, broadish, transverse, pale bands, each of which, at its juncture with the scuta, is marked by a white spot. Native of Ceylon according to Seba, who improperly calls it a kind of Cobra de Capello. It is uncertain whether it be a poisonous species or not, but it bears a highly malignant aspect.

CRIMSON-SIDED SNAKE.

Coluber Porphyriacus. C. nigro-violaceus, lateribus abdomineque purpureis, scutis nigro marginatis.

Violet-black Snake, with the abdomen and sides crimson; the scuta margined with black.

Coluber Porphyriacus. Zool. of New Holl. p. 27. pl. 10.

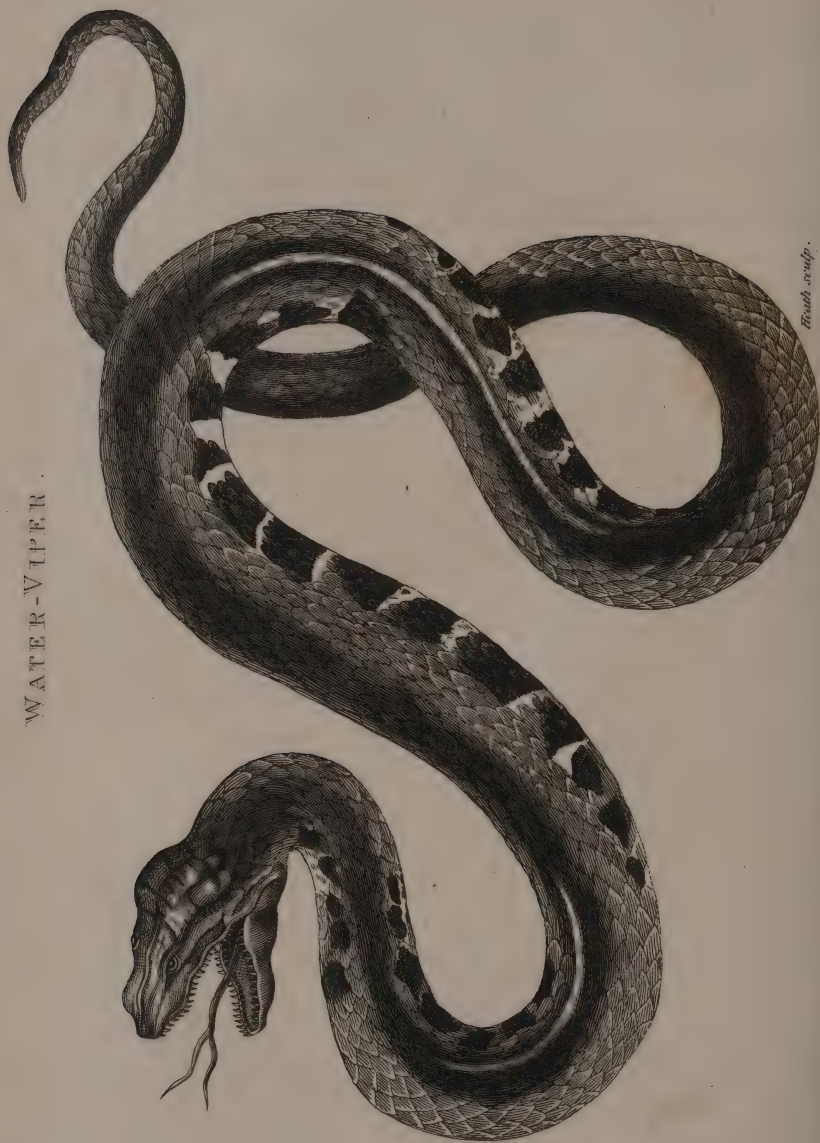
Abdominal scuta 188, anal scuta 7, subcaudal squamæ 45.

A MODERATELY large, and highly beautiful species: general proportions nearly the same with those of the Col. *Natrix*, or common English Snake: head rather small, and covered in front with large scales: colour of the head and whole upper parts very fine deep violet: sides and abdomen crimson, deepest on the former, the large scales nearest the scuta being carmine-coloured, with black tips: the abdomen rose-coloured, with a tinge of yellow, each scutum deeply edged with black; thus forming a beautiful series of transverse black bars down the abdomen: the tail measures about a sixth of the whole length, and is furnished beneath, exclusive of the divided

subcaudal scales, with about seven scuta or undivided lamellæ, commencing immediately beyond the vent, which is edged with several smaller squamæ: the colour of the under part of the tail is a blueish ash, the rose-colour of the abdomen ceasing at the commencement of the tail.

I must here apologize for an inaccuracy in the description of this Snake in the Zoology of New Holland, where it is mentioned as destitute of fangs, and consequently innoxious; the specimen then examined having been somewhat mutilated: others, however, which have been since received, are found to be furnished with those organs, and the animal is even said to be highly dreaded by the natives of Australasia. It furnishes an additional example of a poisonous snake with the head covered with large scales in front, and thus resembling the major part of the innoxious serpents. I must also add, that the figure in the Zoology of New Holland, though accurate in all other particulars, yet represents the animal somewhat too thick in proportion to its length; a fault which is amended in the representation given in the present work.

WATER-VIPER.



Brush sculp.

HÆMACHATE SNAKE.

Coluber Hæmachates. *C. ruber, albo nebulatus, abdomine albo-flavescente.*

Red Snake, clouded with white, with yellowish white abdomen.

Serpens Asiatica Hæmachates dicta. *Seb. 2. t. 58. fig. 1, 3.*

L'Hæmachate. *Cepede Serp. p. 115. pl. 3. f. 2.*

Abdominal scuta 132, subcaudal scales 43 pair.

AN elegant species; well represented by Seba, who informs us that it is a native of the East Indies, having been received from Persia and Japan. Its general length is about two feet or more; its colour red, more or less deep in different individuals, and sometimes of a brownish cast; variegated with white or whitish undulations, so as to appear as if marbled: under parts yellow or whitish: head moderately large, and covered in front with large scales: tail extremely short, tapering to a point. It is, according to Cepede, a poisonous species.

 WATER VIPER.

Coluber Aquaticus. *C. fuscus, abdomine nigro flavoque fasciato.*
Brown Snake, with the abdomen banded with black and yellow.

Water Viper. *Catesb. Carol. 2. pl. 43.*

“THIS serpent,” says Catesby, “is called in Carolina the Water Rattle-Snake; not that it hath a rattle, but is a large snake, and coloured not

much unlike the Rattle-Snake, and the bite said to be as mortal. This Snake frequents the water, and is never seen at any great distance from it: the back and head are brown; the belly transversely marked with black and yellow alternately, as are the sides of the neck: the neck is small, the head large, and armed with the like destructive weapons as the Rattle-Snake: it is very nimble, and particularly dextrous in catching fish. In summer great numbers are seen lying on the branches of trees hanging over rivers, from which at the approach of a boat they drop down into the water, and often into the boat, on the men's heads: they lie in this manner to surprise either birds or fish, after which last they plunge, and pursue them with great swiftness, and catch some of a large size, which they carry on shore and swallow whole. One of these I surprised swimming ashore with a large cat-fish in its mouth. The tail is small towards the end, and terminates in a blunt horny point about half an inch in length, and which, though harmless, is considered as of dreadful efficacy by the credulous vulgar, who believe that the animal is able, with this weapon, not only to kill men and other animals, but even to destroy a tree by wounding it with it; the tree withering, turning black, and dying."

WHITE SNAKE.

Coluber Niveus. *C. totus albus immaculatus.*

Snake entirely white, without any variegations.

Coluber niveus. *Lin. Syst. Nat. p. 334.*

Abdominal scuta 209, subcaudal squamæ 62.

OBSERVED by Linnæus in the Museum of De-geer: colour entirely white, without any spots: said to be a native of Africa, and a poisonous species. Linnæus, in the Systema Naturæ, refers to the fifteenth plate of Seba's second volume, which represents a moderately large snake of a white colour, with a few distant, small oblong black specks on the upper parts of the body, and which is rather supposed by Mr. Merrem to be a variety of the Coluber pullatus.

MILK-WHITE SNAKE.

Coluber Lacteus. *C. albus, dorso maculis atris geminatis, vertice atro linea longitudinali alba.*

White Snake, with the back marked by double black spots; the head black with a longitudinal white line.

Coluber Lacteus. *Lin. Syst. Nat. p. 381.*

Abdominal scuta 203, subcaudal squamæ 32.

LENGTH of the specimen described by Linnæus about a foot and half: diameter scarcely that of a finger: head ovate, with the top black, marked by a longitudinal white line: eyes small: throat white: trunk cylindric, white, marked with

double black confluent spots of considerable size: abdomen livid or brownish: tail a ninth part of the whole length, and slightly tapering. Linnæus observes that this species has somewhat the habit of the *Anguis Scytale*. Native of India and South America, and said to be poisonous.

BROAD-CHEEKED SNAKE.

Coluber Buccatus. C. albidus maculis magnis dorsalibus duplicatis fuscis, capite subdepresso, genis tumidis.

Whitish Snake, with large double brown dorsal spots, subdepressed head, and tumid cheeks.

Coluber Buccatus. Lin. Syst. Nat. p. 377.

Abdominal scuta 107, subcaudal scales 72.

A SMALL species; the specimen described by Linnæus measuring about a foot in length: head large, very thick on the sides, flattish, white, and marked by a trigonal dusky spot over the snout, and by a dusky line reaching to the eye on each side: trunk white or whitish, marked all along the back by a double row of very broad brown spots, which almost fill the whole space of the skin: tail rather slender; measuring about a fourth of the whole: native of South America and of India: a poisonous species.

FIERCE SNAKE.

Coluber Atrox. *C. griseus, fasciis transversis linearibus albidis, abdomine fusco albo transversim variato.*

Grey-brown Snake, with transverse linear whitish stripes, and dusky abdomen with white transverse variegations.

Coluber Atrox. *Lin. Syst. Nat. p. 388. Mus. Ad. Frid. p. 33. t. 22. f. 2.*

Abdominal scuta 196, subcaudal scales 69.

THIS, according to Linnæus, is a small species, measuring about a foot and a half in length, and of a grey colour, marbled beneath with transverse alternate deep brown spots: the head is depressed, compressed, and covered with very small scales, which, as well as the larger ones on the rest of the animal, are carinated. In the *Museum Adolphi Friderici*, p. 33. this species is, by a mistake, inscribed *angulatus*, while the figure, on plate 22 of that work, represents the body marked by several distant, narrow, transverse whitish bands reaching to the abdomen, which is spotted with small, round, white specks: the dusky transverse spots appearing only beneath the tail: the general colour of the abdomen, however, in this snake is rather deep brown or blackish, beautifully variegated or marbled by numerous narrow transverse bands, accompanied here and there with small spots: the tail is remarkably short and slender. In the *Systema Naturæ* a mistaken reference appears to be made to a figure in Seba representing a very different species. The *C. atrox* is a poisonous snake, and is a native of the island of Ceylon.

SHORT-HEADED SNAKE.

Coluber Breviceps. C. capite brevi, corpore vario.

Snake with short head and variegated body.

Cobra, s. *Vipera de Neustria, coronata, Ceilonica: fœmina.*

Seb. 2. t. 46. f. 2.

Serpens Porphyrus Brasiliensis. Seb. 1. t. 85. f. 1.

THIS, from the description and figures of Seba, appears to be a highly elegant species, but seems to vary considerably in its colours; one specimen being of a blueish grey, with large patches of rufous brown, accompanied by smaller spots of similar colour; while the abdomen is of a pale ferruginous cast, without any spots or variegations. The other specimen (for both appear evidently to belong to the same species, though described as different ones by the author) is pale yellow, with large patches and variegations of black, beautifully intermixed with red and white specks, the abdomen being marked by numerous transverse bars of red and white, the scuta appearing edged with black: the head is large, short, obtuse, slightly cordate, covered with moderately large scales, and elegantly variegated with small spots and marks of red, black, &c.; the neck and body are thick; the tail short, and tapering to the tip: the whole animal has an appearance, in some degree, resembling that of a Viper, though very different in its colours, and thicker in proportion to its length, which is about two feet; the first described specimen is, according to Seba, a native of Ceylon, the other of Brasil.

SILVER-EYED SNAKE.

Coluber Melanis. *C. ater, lateribus subcæruleo nebulosis, iridibus fuscis, margine pupillari argentea.*

Deep-black Snake, with the sides clouded with blueish, the eyes brown, with the edge of the pupil silvery.

Coluber Melanis. *Lin. Syst. Nat. Gmel. p. 1087. Pall. it. 1. p. 460.*

Abdominal scuta 148, subcaudal scales 27.

A SIBERIAN species, and found about the borders of the Volga and the Samara, where it was observed by Dr. Pallas. It has a general resemblance to the Viper, but differs in colour, being of a deep black on the back, of a steely lustre beneath, marked with patches of a deeper cast, while along the sides are dispersed a kind of clouds or spots of a blueish colour: the eyes are of a bright white, with perpendicular pupils, and ferruginous irides: the tail is short, and gradually tapers to the tip: upon the whole, it may well be doubted whether this be any thing more than a variety of the common Viper.

CORALLINE SNAKE.

Coluber Corallinus. *C. glaucus, squamis subcordatis, supra lineis tribus longitudinalibus fuscis.*

Glaucous Snake, with subcordated scales, and three brown lines down the back.

Coluber Corallinus. *Lin. Syst. Nat. p. 384.*

Serpens Corallina Amboinensis. *Seb. 2. t. 17. f. 1.*

Abdominal scuta 193, subcaudal scales 82.

LENGTH near three feet: head small, and covered with large scales: those on the body small, somewhat heart-shaped, and disposed in longitudinal rays or stripes, representing, in some degree, the articulations of Coralline: colour above blueish grey, sometimes greenish, with three dusky or rufous longitudinal streaks down the back: tail rather long, and tapering to a slender tip: abdomen pale. This, according to Linnæus, is a poisonous species: it preys on lizards, &c. In Seba is a representation of the identical specimen afterwards described by Linnæus*, taken in the act of swallowing a lizard, of at least equal diameter with its own body, in consequence of which the jaws are distended in such a manner as to alter entirely the natural appearance of the head, by stretching the lower into a perpendicular direction. It is a native of the eastern regions.

* Mus. Ad. Frid. p. 33.



CORALLINE SNAKE.

CANADA SNAKE.

Coluber Leberis. *C. pallidus, supra fasciis linearibus nigris capite albido.*

Pale Snake, with white head, and body marked above by linear black bands.

Coluber Leberis. *Lin. Syst. Nat. p. 275.*

Abdominal scuta 110, subcaudal scales 50.

SLIGHTLY described by Kalm, who informs us that it is a native of Canada, and that the upper parts are traversed by linear black bands: the head is white, with two rufous spots on the top, and a triangular spot over the nose: it is marked in the *Systema Naturæ* as a poisonous species, but Dr. Gray, in his paper on the Amphibia published in the *Philosophical Transactions*, considers this particular as doubtful.

 SUPERB SNAKE.

Coluber Elegantissimus. *C. albus capite nigro variato, corpore supra maculis rubris ocellatis serie quintuplici per dorsum dispositis.*

White Snake, with head variegated with black, and body marked above by a quintuple series of ocellated red spots.

Serpens lemniscata venustissima Americana. *Seb. 1. t. 81. f. 5.*

THIS, from the description and figure of Seba, appears to be a beautiful species, measuring about two feet in length; of a white colour, marked down the upper part with a quintuple series of black spots, with red centres, the middle row

being composed of very small spots, the next on each side of larger ocellated ones, and the lowest on each side, next the scuta, resembling that on the middle of the back, and consisting of small specks: the head is marked by a cross-shaped spot on the top, and by a few blackish ones across the snout: the tail appears short in proportion to the animal, measuring about two inches and a half, and tapering to a point. In the Gmelinian edition of the *Systema Naturæ* this snake is marked, I know not on what authority, as a poisonous species. It is said by Seba to be a native of America.

AULIC SNAKE.

Coluber Aulicus. C. griseo-fuscus, fasciis transversis albis super latera bifurcis.

Grey-brown Snake, with transverse white bands bifurcating over the sides.

Coluber Aulicus. Lin. Syst. Nat. p. 381.

Abdominal scuta 184, subcaudal scales 60.

A SMALL species, the specimen described by Linnaeus measuring only half a foot in length, and about a third of an inch in diameter: colour grey-brown, with more than twenty linear, white transverse bands, each bifurcated towards the abdomen: head white behind: tail about the fourth of the whole length: native of America, and considered as a poisonous species.

ZEBOA.

Vipera Orientalis, Hebræis *Zeboa*, Græcis *Hyæna* dicta. *Seb.* 2. *t.* 78. *f.* 1.

OF the size and general appearance of the common Viper, but differing in colour, being of a pale yellow, with the marks on the head, dorsal band, and lateral spots, of a reddish chesnut colour: perhaps no other than a variety of the Viper; yet the head is represented as covered in front with large scales: native of the Indian islands.

 BOIQUATRARA.

Serpens Indica Boiquatrara dicta. *Seb.* 2. *t.* 78. *f.* 4.

EXTREMELY resembling the preceding, but of larger size: colour cinereous yellow, with chesnut coloured dorsal stripe, consisting of large well-defined rhomboid spots touching each other: lateral spots, ovate, distinct, and reddish brown: head marked by a divaricated linear stripe on the top, the ends pointing backwards: perhaps, like the former, a variety of the common Viper.

MALPALON.

Serpens Ceilanica *Malpalon* dicta à Rajo in Synops. p. 331.
Seb. 2. t. 39. f. 4.

A BEAUTIFUL snake, about the size of the common Viper, and of a bright yellow colour, with a black dorsal stripe consisting of rather small, numerous, alternate, squarish spots (but with round, projecting ends), united to a middle black line: lateral spots of similar form, but of a red colour: sides of the body, near the scuta, speckled with black: head rather large, of a somewhat lengthened form, covered in front with large scales, and variegated with black spots: abdomen yellow, spotted with black: tail rather long, and gradually tapering to a fine point.

 STRIATED SNAKE.

Serpens Brasiliensis versicolor, species Æsculapii. *Seb. 2. t. 42. f. 1.*

LENGTH about two feet: colour above pale blue, elegantly undulated by numerous blackish transverse streaks: head of moderate size, large-scaled, spotted with black, and marked at the beginning of the neck with a pair of short streaks: abdomen white: tail moderately taper.

SERENUS.

Serpens Cenchrus, vel *Serenus* Brasiliensis. *Seb.* 2. t. 42. f. 2.

ABOUT the size of the preceding: colour above blue, with a moderately broad dorsal sea-green stripe, marked with a few small, distant, black spots: the sides marked with deep blue or blackish spots: head of moderate size, large-scaled, and marked at the top by a large and somewhat triangular white spot pointing backwards: abdomen white, the scuta pretty deeply edged or variegated with dark brown: tail gradually tapering to a fine point: native of Brasil.

 LOZENGE-SPOTTED SNAKE.

Coluber Rhombeatus. *C. glaucus, maculis rhombeatis nigricantibus medio cæruleis.*

Glaucous Snake, with blackish lozenge-shaped spots blue in the middle.

Coluber Rhombeatus. *Lin. Syst. Nat. p. 380. Mus. Ad. Frid. p. 27. t. 24. f. 2.*

Vipera Cencoatl dicta. *Seb. 2. t. 26. f. 1, 2, 3?*

Serpens Amboinensis tigrina. *Seb. 2. t. 15. f. 2.*

Abdominal scuta 157, subcaudal scales 70.

GENERAL length from two to three feet or more: colour grey or brownish, with three alternating, longitudinal rows of ovate, but somewhat rhomboid, dusky spots with large blueish centres: head rather large than small: abdomen pale or whitish, often clouded with blueish grey: the

rhomboid spots are most regular in the smaller specimens, in the larger becoming somewhat more broken in the outline and more approaching to an ovate form: native of India and South America: in the number of its abdominal and subcaudal scales it occasionally varies considerably.

OCELLATED SNAKE.

Coluber Ocellatus. C. castaneus, maculis ocellatis fuscis abdomine flavo.

Chesnut-coloured Snake, with ocellated brown spots, and yellow abdomen.

Serpens Guineensis rarissima Argus dicta. Seb. 2. t. 23. f. 1.

SIZE and general proportions of the Viper: colour pale chesnut, beautifully marked with five alternating rows of round ocellated spots, those of the middle range being the largest and of a blackish brown, the lateral ones of a paler or more rufous brown: abdomen yellow, with small scattered rufous spots: head covered with small scales: tail tapering to a moderately slender tip: native, according to Seba, of Guinea, and a rare species.

ARGUS SNAKE.

Coluber Argus. *C. fusco-castaneus, subtus flavescens, supra maculis ocellaribus rubris transversim fasciatus.*

Chesnut brown Snake, yellow beneath, and banded above by transverse rows of ocellated red spots.

Serpens Arabica Brasiliensibus *Ibiboboca* & *Boiguacu* dicta; alias Argus. *Seb. 2. t. 103.*

LINNÆUS, relaxing from the strictness of his general rule, has admitted this snake into the *Systema Naturæ*, though he knew not the number of its scuta and squamæ, which he seems to have considered as the most important of all points in the history of Serpents: it indeed forms a very useful addition to the general character, and should never be neglected where it can be ascertained; but can hardly be considered as the only, or even the chief, mark of distinction*. The Argus Snake is a large and elegant species, measuring, according to Seba, its first describer, above five feet in length, and being of a moderate thickness in proportion: the head is large, flattish, covered in front with small scales, and so very protuberant on each side at the hind part as to appear heart-shaped, or rather bilobate: the teeth large and strong: the whole upper surface of the animal is of a dusky chesnut colour, the scales being small, ovate, and each marked by a white speck; while

* Scuta in serpentibus plurimum variant, ut nunquam scutis ipsis fidendum.—*Laurenti.*

the body is beautifully marked from head to tail by numerous transverse rows of round ocellated red spots, surrounded by a white iris and by an exterior red one: the number of these ocellated spots in each row is about seven or eight: the under part of the animal or abdomen is of a pale yellow colour: the scuta broad in proportion to the body; the tail moderately slender, tapering to a point, and seemingly measuring about a fifth of the whole length. This Snake is, according to Seba, a native of Arabia. The appearance of the head seems strongly to indicate a poisonous species.

CHIAMETLA SNAKE.

Coluber Chiametla. *C. cæruleus, subtus flavus, singulis squamis macula alba notatis.*

Blue Snake, yellow beneath, with every scale marked by a white spot.

Serpens Americana *Chiametla* dicta. *Seb. 2. t. 61. f. 1.*

Vipera cærulea Americana ex insula Sancti Eustachii. *Seb. 2. t. 36. f. 4.*

THIS, which is described and figured by Seba, is a highly beautiful species, measuring about four feet and a half in length, and having nearly the same general proportions with the common English snake, except that the head is larger. The colour of the whole animal above is a beautiful vivid blue, each scale being marked in the middle by a white spot: along the sides is a row of moderately distant black spots with white centres: the head is covered with large scales, and is

unspotted, as is also the thinnest part of the tail, where the blue is more intense than on the other parts: the under part of the animal is of a yellowish white, and in a smaller specimen figured in the same work the abdomen is of an orange-colour. This species is a native of South America and the West-Indian islands: uncertain whether poisonous or not.

JAVA SNAKE.

Coluber Javanicus. C. griseus, capite cæruleo striato, corpore striis cæruleis margine luteis decussato.

Grey Snake, with the head striped with blue, and the body crossed by blue stripes with gold-coloured edges.

Abdominal scuta 312, subcaudal scales 93.

THIS remarkable snake is described by Mr. Wurmb, in the Memoirs of the Batavian Society for the year 1787. It grows to the length of nine feet, and is principally seen in the rice-fields of Java; but it is added, that those which are found in the higher and more wooded situations arrive at a far superior size, so as to become dangerous from their strength alone, devouring not only rats, birds, &c. but even some of the larger animals, which cannot always escape their pursuit. The head of this snake is large and flat, and covered, as in the major part of this genus, with large scaly plates: the mouth is furnished with double rows of sharp teeth, but is destitute of fangs, the animal not being of a poisonous nature: the iris of

the eye is yellow: the upper part of the head grey mixed with blue: from behind the eyes pass two deep-blue stripes to the upper part of the neck, where they unite into an arch about an inch beyond the head: a third stripe of the same colour proceeds from the snout to the occiput, where it divides into two, and surrounds a yellow spot marked with a few blue specks: the upper part of the body is divided, as it were, into squares resembling a kind of lattice-work, formed by stripes of bright blue with gold-coloured edges: the middle parts of the squares being of a grey colour, with changeable reflections of yellow, blue, and green: towards the sides the grey colour is of a lighter or paler cast, as well as on the tail, where the squares are smaller than on the back: each side of the body is also marked by a row of white spots, situated at the crossings of the blue stripes. This superb species is called in Java by the title of *Oular-Sawa*, or Rice-Field Snake.

DABOYA SNAKE.

Le Daboie. *Cepede Serp. p. 255. pl. 13. f. 2.*

THIS Snake is slightly described by the Count de Cepede, who considers it as the species which, in the kingdom of Juda, or Widah, and some other parts of Africa, is regarded as a deity, and kept in temples consecrated to its worship. This superstition is said by the traveller De Marchais to

have originated from the following circumstance, viz. the army of Juda being on the point of yielding to that of Ardra, it happened that a large serpent of this species made its appearance, which the chief priest (probably knowing it to be innoxious) lifted up in his arms, and displaying it as a kind of miracle, or at least as a propitious omen, persuaded the army again to rally, by which means a signal victory was obtained, and the animal was in consequence exalted into a divinity. It is said to arrive at a very considerable size, and is of a whitish colour, ornamented on the upper part throughout the whole length, by a triple range of large oval rufous patches bordered with black: the head is rather large, and covered with oval carinated scales similar to those on the rest of the animal: the mouth is destitute of fangs: the specimen in the royal cabinet, described by the Count de Cepede, measured three feet five inches in total length, the tail measuring five inches and nine lines.

BRASILIAN SNAKE.

La Brasilienne. *Cepede Serp. p. 119. pl. 4. f. 1.*

DESCRIBED by Cepede, and considered as a species before unnoticed: length about three feet, but probably grows to a much larger size: head, as well as body, covered with oval carinated scales: snout terminated by a large and almost perpendicular scale rounded at top, but emarginated at

the bottom for the passage of the tongue: upper parts of the animal marked by large, oval, rufous patches bordered with black; and in the intervals between the large patches are several much smaller ones of a dusky colour: fangs very large: native of Brasil. From the jaws of a poisonous serpent from the same country, preserved in the royal cabinet, and agreeing in all particulars, except in size, with those of the above species, the Count de Cepede infers that the animal, at its full size, may be supposed to arrive at the length of six feet.

If we compare the description of this species with that of the *Daboya*, we shall find an extreme resemblance between the two animals, the *Daboya* only appearing to differ from the present species in not being furnished with fangs.

TRIANGULAR-HEADED SNAKE.

La Tête-Triangulaire. *Cepede Serp. p. 132. pl. 5. f. 2.*

ALLIED in general appearance to the common Viper: colour greenish, with spots of different shapes on the head and body, uniting so as to form an irregular band down the back: abdomen dusky, with white edges: head of a more triangular shape than usual, owing to the projecting ends of the jaws, covered with small scales, which, as well as those on the body, are smooth, or not carinated: total length two feet, of which the tail

measures three inches and nine lines: native of the island of Eustatia: described by the Count de Ceppe.

PANTHER SNAKE.

La Tigrée. *Ceppe Serp.* p. 136.

ALLIED to the Viper: length about a foot and half: tail two inches: head like that of the common Viper: all the scales carinated: colour of the upper parts whitish rufous, with dusky spots bordered with black, like those on the skin of a panther or leopard: colour of the under parts not specified. Described by Ceppe. Native country unknown. This seems allied to the *Ocellated Snake*.

LEOPARD SNAKE.

Serpens tigrina ex insula Bali, &c. *Seb. 2. t. 46. f. 3*

LENGTH about two feet: colour a beautiful yellow, spotted with numerous, moderately small, ovate, or roundish black or deep brown spots: abdomen variegated with transverse brown streaks: head rather small, large-scaled, rather sharp-snouted, of a brown colour above: tail rather slender, and tapering to a fine point: native of the Indian islands.

SPOTTED SNAKE.

Coluber Maculatus. *C. cærulescens, nigro maculatus, subtus albidus, scutis margine maculis dimidiatis nigris.*

Blueish Snake, spotted with black, whitish beneath, with the scuta marked on the edge with dimidiated black spots.

GENERAL habit of *C. Natrix*, but not so long in proportion: colour glaucous or pale blueish, marked on the upper parts with numerous, roundish, black spots: sides of the scuta with dimidiated spots of the same colour. It seems much allied to the figure in Seba above referred to, but differs in colour; Seba's specimen being yellow instead of blue: described from a specimen in the British Museum.

RINGED SNAKE.

Coluber Natrix. *C. olivaceo-fuscus (interdum cærulescens) macula collari utrinque nigra, alteraque flava, lateribus nigro maculatis, abdomine fusco.*

Olive-brown (or blueish) Snake, with a black patch accompanied by a yellow one on each side the neck, a row of narrow black spots down each side, and dusky abdomen.

Coluber Natrix. *Lin. Syst. Nat. p. 380.*

Natrix torquata. *Raj. Quadr. 334.*

The Common Snake. Ringed Snake. *Brit. Zool. 3. p. 31.*

Abdominal scuta 170, subcaudal scales 60.

THIS species appears to be pretty generally diffused through all parts of Europe, and is common in our own island, frequenting woods, moist

hedges, and shady places: in colour it occasionally varies, but is generally either of a blueish grey or pale olive on the upper parts, marked along the sides by a row of small transverse black streaks, alternating with some smaller spots of the same colour; and on each side the neck is a black and somewhat semilunar patch, the horns or tips pointing forward: this is bounded in front by a second patch of a pale yellow or whitish colour, thus forming a kind of collar on each side the neck: the under parts are of a mixed black and whitish colour, the black being disposed in large squarish alternate patches or divisions, which towards the tail become more confluent, so as nearly to exclude the other variegations: the head is rather small than large, and is covered with large scaly plates: the sides of the mouth are marked by several black bars: the remainder of the upper parts are covered with ovate and slightly carinated scales: the tail is of moderate length, and gradually tapers to the extremity. This animal is of an innoxious nature, and may be tamed to a considerable degree. Mr. White, in his *History of Selburne*, has the following remark on this subject: "I knew a gentleman who kept a tame snake, which was in its person as sweet as any animal; but as soon as a stranger, or a dog or cat came in, fell to hissing, and filled the room with such nauseous effluvia as rendered it hardly supportable." The snake chiefly lives by preying on frogs, mice, small birds, insects, worms, &c. It is known to frequent the water occasionally, for the sake of

frogs, &c. and is capable of swimming, though not with any great degree of celerity. It deposits its eggs in any warm and moist situation, as under hedges, in dunghills, &c. in the form of a continued chain or necklace of ova, to the number of twelve, fourteen, sixteen, or even twenty, of the size of those of a blackbird, and of a whitish colour: these, according to the observations of Mr. White, "do not hatch till the spring following,"

During the winter the snake conceals itself in any convenient retreat, and becomes nearly torpid, reappearing in the spring, when it casts its skin, which cracking or opening on the edges of the lips, is, by the efforts of the animal, gradually thrown off, in an inverted direction, throughout its whole length, to the very terminal scale of the tail, and so complete is the spoil or exuvium, as to exhibit the very coat or membrane of the eyes* themselves: the whole skin is entirely transparent.

* Not the cornea itself, but its exterior pellicle.

FRENCH SNAKE.

Coluber Atrovirens. *C. atrovirens, flavo maculatus, abdomine flavo lateribus nigro punctato,*

Black-green Snake, speckled with yellow; the abdomen yellow, with a row of black specks down each side.

Anguis Æsculapii niger. *Aldrov. Serp. p. 271. Jonst. Rept. t. V.*

La Coleuvre verte & jaune. *Cepede Serp. p. 137. pl. 6. f. 1.*

Abdominal scuta 206, subcaudal scales 107.

THIS seems to be the species figured in Aldrovandus under the name of *Anguis Æsculapii niger*, and which appears to have been so little attended to by modern naturalists as to have been generally confounded with the preceding, till it was again brought to notice by Mons. Daubenton, and afterwards by the Count de Cepede, who has accurately described it, and who informs us that it is very frequent in some of the Provinces of France, being found in woods and moist shady places: in its general size and appearance it resembles the Ringed Snake or *Natrix*, but differs in colour, being of an extremely dark or blackish green, so as to appear black on a cursory view, the sides being marked by numerous rays of yellow specks, of different forms, some oblong, and some square, and which form somewhat more decided or distinctly marked stripes towards the tail than towards the head: the eyes and edges of the mouth are bordered with yellow scales: the abdomen is also yellow, each scutum being marked on each side by a black speck. This snake is an animal of a perfectly harmless nature, and, like

the former, is capable of being tamed to a considerable degree. The Count de Cepede relates, from Mr. Bomare, an anecdote relative to a snake which he supposes to have been of this species, which had been so completely tamed by a lady, as to come to her whenever she called it, follow her in her walks, wreath itself round her arms, and sleep in her bosom. One day, when this lady went in a boat, to some distance up a large river, she threw the snake into the water; imagining that it would readily recover the boat by swimming; but the current proving unusually strong, at that juncture, owing to the advance of the tide, the poor animal, in spite of all its efforts to reach the vessel, was unfortunately drowned. On the approach of winter this species, like the former, retires into subterraneous retreats, and passes that season in a state of torpidity, from which it recovers in the spring, when it casts its skin, and appears in its highest beauty.

DUN SNAKE.

Coluber Elaphis. *C. gilvus, supra lineis quatuor longitudinalibus nigris, abdomine albido.*

Gilvous Snake, with four longitudinal black lines, and whitish abdomen.

Elaphis. *Aldrov. Serp. p. 266, 267. Jonst. Rept. t. V.*

La Quatre-Raies. *Cepede Serp. p. 163. pl. 7. f. 1.*

Abdominal scuta 218, subcaudal scales 73.

THOUGH this species has been pretty well figured in the work of Aldrovandus, and from

thence copied into that of Johnston, yet it appears to have been in a great degree unknown to modern naturalists till it was more distinctly described by the Count de Cepede, who informs us that it is found in some parts* of France, and measures near four feet in length: its colour is a very pale reddish brown, or dun, marked on each side the back, throughout the whole length, by two dusky or blackish longitudinal stripes, commencing on each side the head, which is covered with large scaly plates: the scales on the back are carinated, those on the sides smooth: the abdomen is pale or whitish: the tail measures about nine inches in length, and gradually tapers to the extremity: the general form of the animal resembles that of the common snake, but it is somewhat thicker in proportion to its length: it is a perfectly harmless species; occurs in Italy as well as in France, and may probably be found in most of the warmer parts of Europe.

* According to Latreille, not uncommon in ci-devant Provence.

ÆSCULAPIAN SNAKE.

Coluber Æsculapii. C. rufus, linea utrinque laterali fusca, abdomine albido fusco variato.

Rufous Snake, with a dusky lateral stripe on each side, and whitish abdomen variegated with brown.

Anguis Æsculapii vulgaris. Aldrov. Serp. p. 270. Jonst. Serp. t. V.

Le Serpent d'Esculape. Cepede Serp. p. 165. pl. 7. f. 2.

Abdominal scuta 175, subcaudal scales 64 pair.

THIS, says Cepede, is common in most of the warm parts of Europe, and is no where more frequent than in the neighbourhood of Rome, and is probably the species peculiarly consecrated by the ancient Romans to the benevolent deity whose name it bears. Whether we admit this supposition or not, we must at all events acknowledge that Linnæus, with peculiar impropriety, applied the title of *Coluber Æsculapii* to an American species. The Snake intended by Cepede is nearly four feet in length, and of a rufous colour on the upper parts, more or less deep in different individuals, the back being marked on each side by a dusky or blackish longitudinal band: the scales on the sides, nearest the scuta, are white bordered beneath with black, thus forming a range of small whitish triangles along each side the body; the head is rather large, and covered in front, as in the common snake, by scaly plates: the scales on the back are oval and carinated; those on the sides smooth: the tail measures about nine inches in length: in its general habit it is much allied to



MOURNING SNAKE.

the Coluber Natrix or Ringed Snake, as well as to the Coluber Atrovirens. In its manners it is perfectly innocent. It has been long ago described and figured in the work of Aldrovandus under the same title by which it is distinguished by the Count de Ceppe.

MOURNING SNAKE.

Coluber Pullatus. *C. supra niger albo variatus, infra albus nigro variatus.*

Snake with the body black above, with white variegations, and white beneath with black variegations.

Coluber Pullatus. *Lin. Syst. Nat. p. 382.*

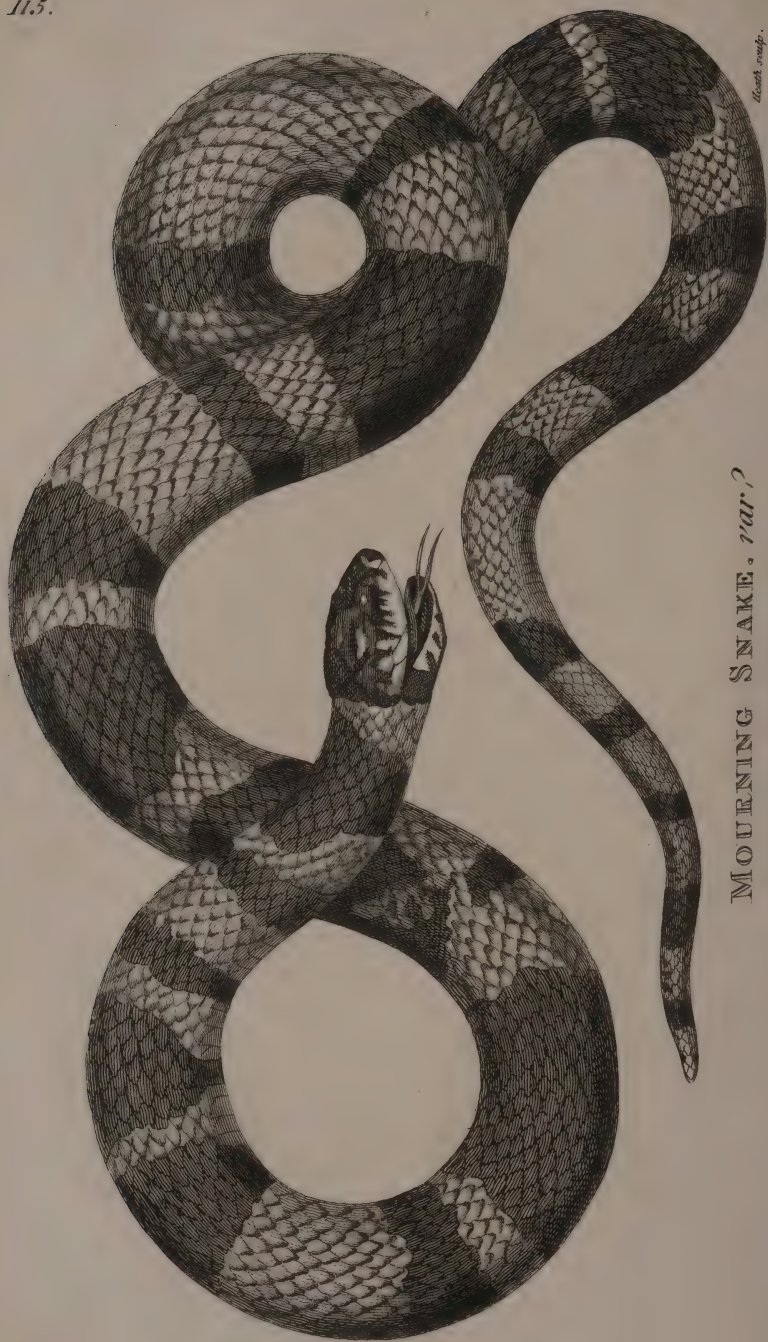
Abdominal scuta 217, subcaudal scales 208.

A LARGE species, often measuring six feet in length: habit rather slender than thick; the general proportions resembling those of the Coluber Natrix, except that the tail is somewhat less slender: head covered in front with large scaly plates; the remainder of the animal on the upper parts with large and slightly carinated scales: general colour black, with white variegations, often differently disposed in different specimens: abdomen commonly white, marked here and there with narrow black bars: sometimes the colours are so disposed that either the black or white might with equal propriety be termed the ground-colour: the head is generally white, and the lips barred with black. Several varieties of the Coluber pullatus appear to be figured in the work of Seba; though it can

hardly be admitted that all the figures quoted by Mr. Merrem, in his *Beytrage zur Naturgeschichte*, can properly be referred to this species. Among the most remarkable are the following, viz.

1. *Serpens ex Lybia*. Seb. 2. t. 15. This is entirely white, with a very few small jet-black oblong spots, very distantly scattered over the upper parts, and some narrow black streaks on the fore part of the abdomen.
2. *Serpens Americana elegantissima, maculis nigris notata*. Seb. 2. t. 22. It is milk-white, the scales, for about a third part of the whole length, being edged with black; thus constituting elegant black reticulations on that part of the animal: a very few small square black spots are also distantly scattered over the remainder of the body, and on the abdomen are a few dusky markings.
3. *Serpens Medock*. Seb. 2. t. 49. Milk-white, with reticular transverse black bars on the anterior part of the body, while the hind part is almost entirely of a dusky brown colour: the lips as in almost all the varieties, barred with black and white.
4. *Tojuqua*. Seb. 2. t. 105. A large snake; the fore parts variegated with black and white; the hind part black, with transverse bands of numerous small white spots.
5. *Serpens Æsculapius Orientalis maximus*. Seb. 2. t. 86. Of a cinereous yellow, with broad deep-brown zones or surrounding bands;

MORNING SNAKE, *var.**Typhlops* *Seba.*



MOORING SNAKE. var?
Serp: Escul: orient: max: Seba.

Black swan.

the scales on the yellow parts being also tipped here and there with brown: this is said by Seba to be a native of Ceylon.

A more extraordinary variety, if Mr. Merrem's conjecture be right, is the *Coluber Petzcoatl*, Seb. 2. t. 84. It is of a fine yellow, with a pretty strong tinge of orange on the back, and several transverse bands of similar colour on different parts of the body: it is of large size, and is described as being very glossy or smooth, and as a native of Mexico, inhabiting hollow trees, &c. the back appears pretty strongly carinated.

If we were inclined to follow Mr. Merrem's example in thus extending supposed varieties, we might proceed a step farther, and refer the *Ana Candaja*, Seb. 2. t. 83. to the same species: its general proportions, and form of scales, are similar, but its colour is pale blue, with the abdomen white: it is a native of Ceylon, and is said to grow to a very large size, and to be able to kill cattle by strangling them.

VAR. ?

THE *Coluber Haje* of Linnæus appears, from the short description given in the *Systema Naturæ*, to be so extremely nearly allied to the *pullatus* both in size and colour, as well as in the number of its scuta and squamæ, that it is impossible not to suppose it the same animal: yet the *Haje* is said by Forskal to be a poisonous species, which the *pullatus* is not.

LARGE-SCALED SNAKE.

Coluber Macrolepidotus. *C. plumbeus, squamis dorsulibus maximis elongatis, abdomine albedo fusco transversim fasciato.*

Lead-coloured Snake, with extremely large elongated dorsal scales, and whitish abdomen, with broad transverse bands.

DESCRIBED from a specimen in the Museum of Dr. William Hunter: general habit that of the *pul-latus*: size of a large *Natrix*: head covered with large scales: remainder of the upper parts with extremely large long scales, exceeding in proportional size those of any other known serpent; those near the ridge of the back, in particular, measure three quarters of an inch in length; their disposition is obliquely backwards: colour on the upper parts blueish, the black skin of the body appearing, as it were, to edge the scales with that colour: under parts blueish white, with extremely broad, brown, transverse bands at intervals, so that the abdomen may be described either as brown with white bands, or *vice versa*: tail of moderate length, taper, round, and covered with hexagonal scales: native place unknown.

CARINATED SNAKE.

Coluber Carinatus. *C. plumbeus, squamis magnis ovatis porosis, abdomine albido, dorso carinato.*

Lead-coloured Snake, with large ovate porous scales, whitish abdomen, and carinated back.

Coluber carinatus. *Lin. Syst. Nat. p. 384.*

Abdominal scuta 157, subcaudal scales 115.

A LARGE species, growing to five or six feet in length, and of a moderate thickness: head rather small, with large scales in front: tail tapering gradually to a point: back much carinated, rising into a ridge on the top: colour deep blueish brown or cinereous, paler or whitish underneath: scales very large, and marked with numerous impressed points, as if pierced with pin-holes: under parts whitish: native of North America: a harmless species: varies as to colour, which is sometimes blueish black, and sometimes cinereous with a rufous cast: scales often pale or whitish towards the tips.

MOLURUS SNAKE.

Coluber Molurus. *C. crassus pallidus, maculis magnis irregularibus rufis margine fuscis variatus, cauda brevi.*

Thick-bodied pale Snake, with large irregular rufous variegations edged with brown, and short tail.

Coluber Molurus. *Lin. Syst. Nat. p. 387.*

Abdominal scuta 248, subcaudal scales 59.

A LARGE snake, with the general habit of a Boa rather than a Coluber, being of very considerable thickness in proportion to its length: head rather large; snout lengthened, like that of the Boa canina, and covered with large scales: tail short, gradually tapering to a point: colour of the whole animal whitish or grey, clouded with large irregular rufous variegations bordered with brown: under parts white. Native of India: not poisonous: grows to the length of five or six feet.

COPPER-BELLIED SNAKE.

Coluber Erythrogaster. *C. fuscus, abdomine cupreo.*

Brown Snake, with copper-coloured abdomen.

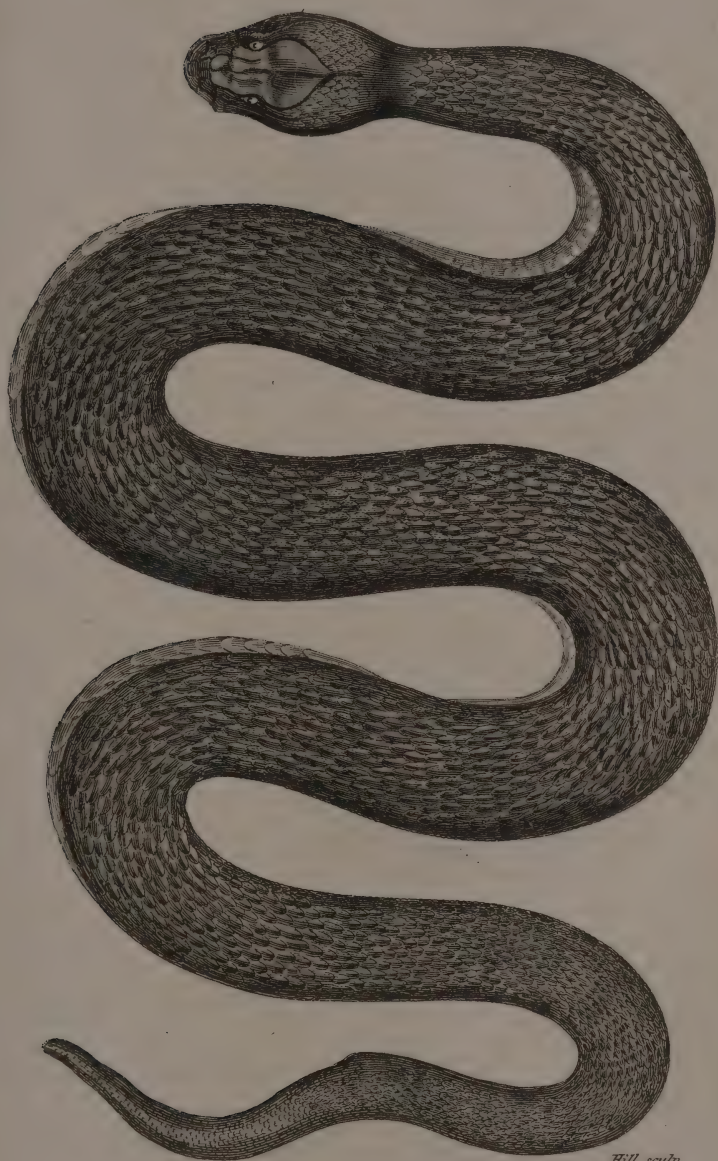
Coluber erythrogaster. *Forst. Catal. Catesb. Carol. 2. t. 46.*

THE Copper-bellied Snake is a native of North America, and is thus described by Catesby in his History of Carolina: "These snakes sometimes approach near to the size of the Rattle-Snake: they are of a brown colour, except their bellies, which are of a muddy red or copper colour: they frequent the water, and very probably prey on fish;

MOLLER'S SNAKE,



COPPER-BELLIED SNAKE.

*Hill sculp.*

but birds and such other animals as they are able to overcome they devour; frequently entering the houses of poultry, sucking the eggs, and devouring the fowls: they are bold, nimble, and active, but are generally reputed not venomous, and have no fangs like the viper kind. I never observed their colours to vary." Mr. Catesby's figure represents the head covered with large scales: and the tail remarkably thick, short, and obtuse.

CUPREOUS SNAKE.

Coluber Acontia. *C. cupreus, squamis albo carinatis, abdomine flavo rubro maculato.*

Copper-coloured Snake, with the scales carinated by a white line, and abdomen yellow with red spots.

Serpens Acontias, sive Jaculus Americanus, &c. *Seb. 2. t. 64. f. 1.*

In its general appearance this snake, according to Seba's figure, bears a considerable resemblance to the Copper-belly of Catesby, but the head is larger, and covered with small scales, the neck thinner, and the tail somewhat more taper: the whole upper parts are of a light copper colour, each scale marked by a white streak or carina: the abdomen is yellow, spotted on the edges with small red specks. From the size of the head, and its being covered with small scales, it should seem that this is a poisonous species. It is a native of the island of Santa Cruz.

SURINAM SNAKE.

Coluber Surinamensis. C. cinereus, subtus subflavescens, corpore fasciis ferrugineis subundulatis transverses cincto.

Cinereous Snake, yellowish beneath, with the body surrounded by somewhat undulated transverse ferruginous bands.

Anguis Surinamensis sonum edens. Seb. 2. t. 59. f. 2.

AN elegant species: length about three feet and a half: habit moderately stout or thick: head rather large, and furnished with largish scales in front: colour of the whole animal cinereous, marked from the neck to the end of the tail with moderately broad, equidistant, and somewhat undulated rufous-yellow bands or zones entirely surrounding the body: tail of moderate length, gradually tapering to the extremity: said to be a native of Surinam: allied in habit to the *Coluber angulatus*.

 CORN SNAKE.

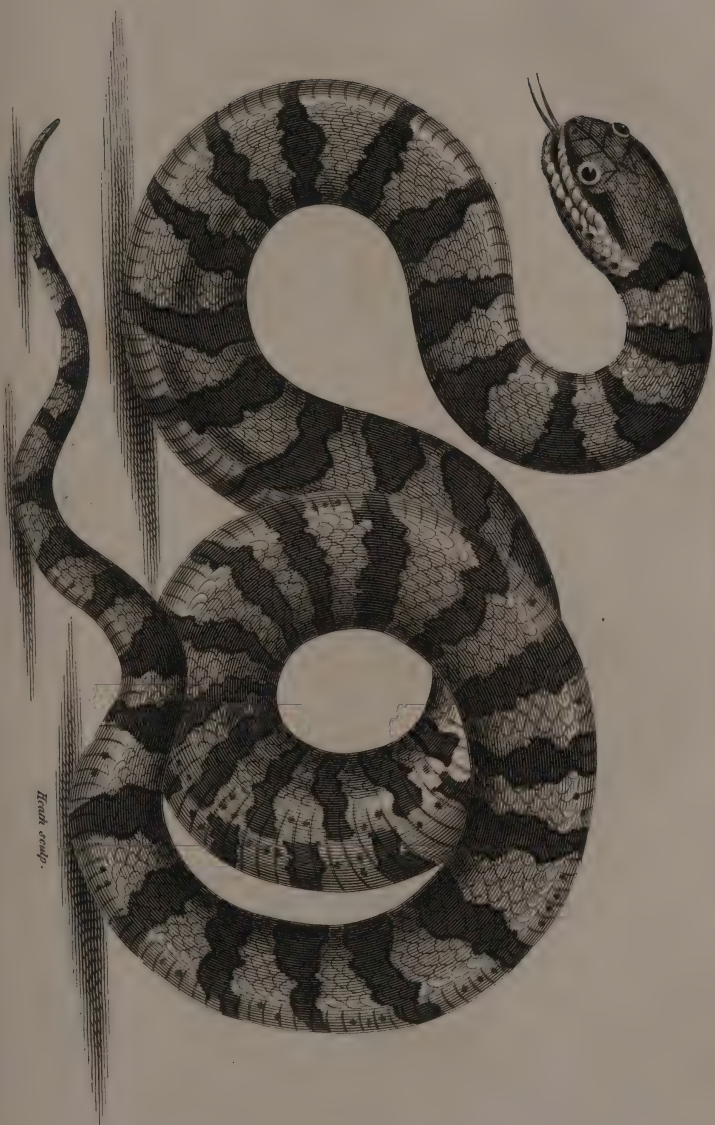
Coluber Carolinianus. C. flavescens, maculis magnis ferrugineis albo nigroque marginatis, abdomine nigro variato.

Yellowish Snake, with large ferruginous spots with black and white margins; and abdomen variegated with black.

Corn Snake. *Catesb. Carol. 2. pl. 55.*

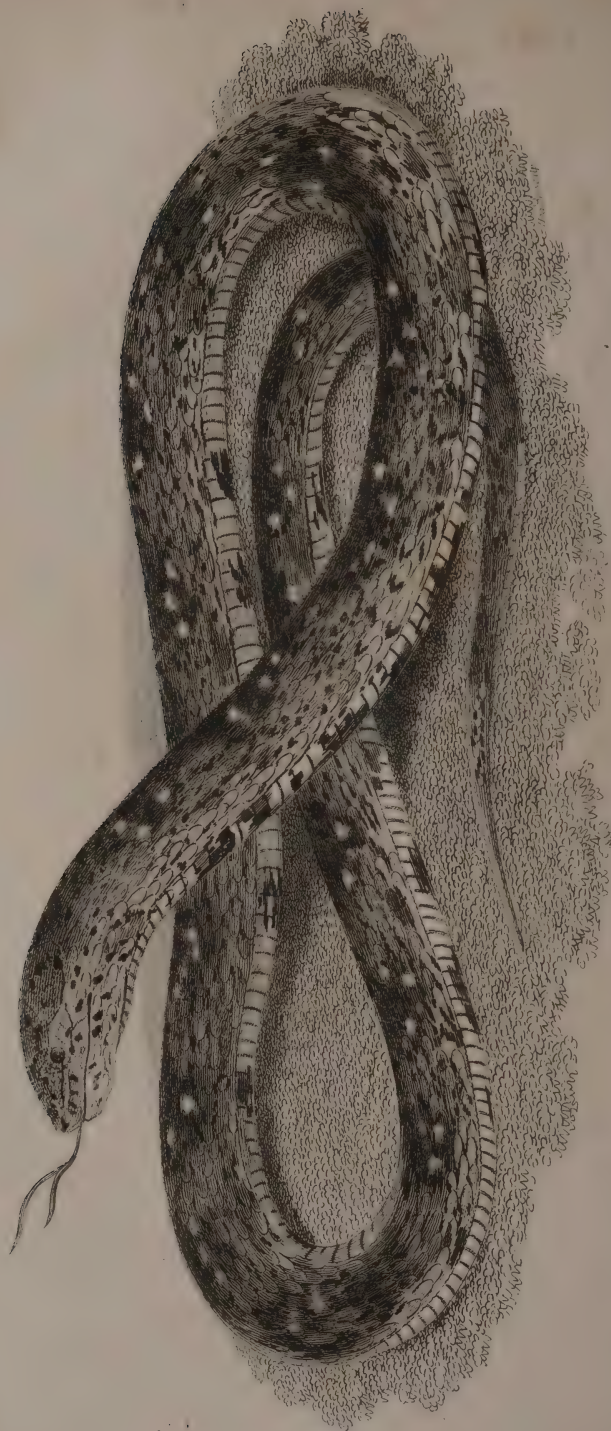
THIS is a highly beautiful animal, arriving sometimes at a very considerable size, and measuring five feet or more in length,, though commonly seen much smaller. Its habit or genera

SURINAM SNAKE.



Heath sculp.

CORN SNAKE.



form resembles that of the *Natrix*, or common English Snake, and its general colour is pale whitish yellow, ornamented on the upper parts with numerous large and somewhat irregular ovate patches of very bright ferruginous, bordered with black or deep brown, with a few small white spots intermixed: these spots or patches are largest on the back, and smallest on the sides, where they are accompanied by still smaller specks of black: the under parts are whitish, tinged with yellow, and varied here and there by irregularly angular blackish patches. Like most other snakes, it appears more or less brilliantly coloured at different periods, and is most beautiful after having cast its skin: the ground-colour is sometimes suffused with a tinge of purple, which adds a peculiar beauty to its appearance. It is of an innocent nature, and is principally found in woods. It is a native of North America, and in particular of Carolina. Mr. Catesby describes it under the name of the Corn Snake, which he tells us is given it from a fancied resemblance of its colour to those of some kinds of Indian corn or maize. It is, according to Catesby, “a great robber of hen-roosts.” His figure represents it as of a subferruginous yellow, with reddish brown dorsal spots and variegations. It is sometimes called by the name of the Beech Snake. The *Compressed Snake* of Mr. Merrem, 2. pl. 11. appears much allied to this in general appearance.

TEXTILE SNAKE.

Coluber Textilis. *C. griseo-flavescens, nigro irroratus, fasciis numerosis undulatis rubro-ferrugineis transversis.*

Yellowish-grey Snake, freckled with black, and marked by numerous, undulated, transverse, bright-ferruginous stripes.

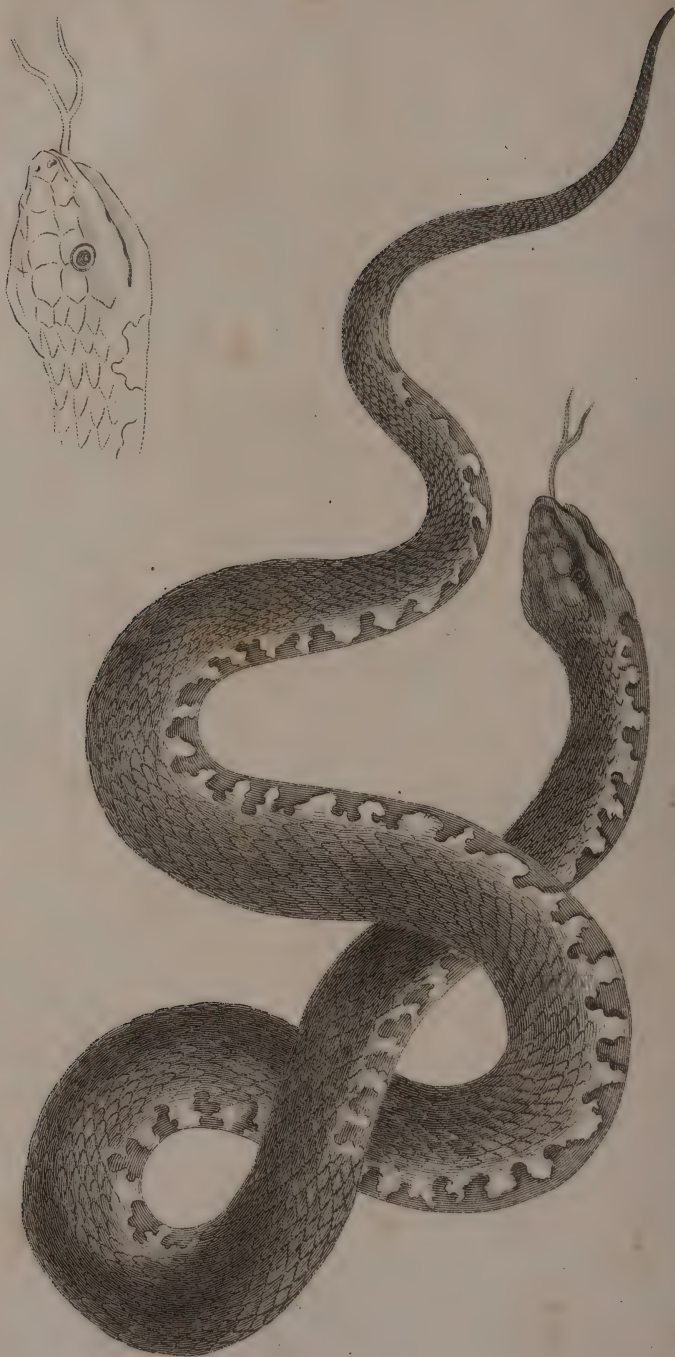
Serpens Brasiliensis textilis. *Seb. 2. t. 67. f. 3.*

Serpens Surinamensis elegans. *Seb. 2. t. 31. f. 1.*

Serpens Ammodytes Americana flammifera. *Seb. 2. t. 31. f. 2.*

A RATHER large and very elegant species, represented on some of Seba's plates, but not referrible to any Linnæan species: general habit that of the Natrix: ground colour yellowish grey, with numerous, pretty closely-placed, transverse, irregularly angular bands of bright ferruginous or dusky red, scattered over, as is also the ground-colour, with numerous black specks of different sizes: head rufous, covered with large scales; under parts throughout the whole length pale yellow: tail very slender and sharp-pointed: native of Brasil, Surinam, and other parts of South America.

WAMPUM SNAKE.



Heath engr.

WAMPUM SNAKE.

Coluber Fasciatus. *C. cæruleus, subtus pallidior cæruleo lucidiore variatus.*

Blue Snake, paler and variegated with brighter blue beneath.

Wampum Snake. *Catesb. Carol. 2. pl. 58*

Coluber fasciatus? *Lin. Syst. Nat. p. 378.*

Fasciated Snake. *Nat. Misc. vol. 8. pl. 266.*

Abdominal scuta 128? subcaudal scales 67?

THIS, which is one of the handsomest of the North American snakes, is described and figured by Catesby, but as that author lived at a period when the rules of modern natural history were in a great degree unknown, he seems to have given a general rather than a minutely accurate representation of the animal; his figure not expressing the abdominal and subcaudal scuta and squamæ. The Wampum Snake, he informs us, is of a dark blue above, the belly being finely clouded with brighter blue: the head small in proportion to the body: he adds, that it is an innocent species, and sometimes grows to the length of five feet, retaining its colours and marks throughout all periods of its growth. It receives its common title of the Wampum Snake from its colours, which resemble those of the strings of Indian money called Wampum, composed of shells cut into regular pieces, and strung with a mixture of blue and white. It is a native of Carolina and Virginia.

BLACK SNAKE.

Coluber Constrictor. *C. totus niger, lucidus, longissimus.*

Shining-black Snake, with very long slender body.

Black Snake. *Catesb. Carol. 2. pl. 48.*

Coluber Constrictor. *Lin. Syst. Nat. p. 385.*

Abdominal scuta 186, subcaudal scales 92.

“THIS,” says Catesby, “is a large and very long snake; some being six feet in length: they are all over of a shining black, never changing their colour, and are very nimble and beneficial in killing rats, which they pursue with wonderful agility to the roofs and all parts of houses and barns, where rats are able to run, for which service they are preserved by most of the inhabitants: they are bold and furious, leaping at and biting those that attack them, though no harm ensues; their bite not being venomous: it is commonly said in Carolina that they will attack and swallow Rattle-Snakes: it is certain most or all snakes will devour one another, not only of their own but of other kinds, which I have often seen; one, after a long struggle, swallowing another but little less than itself. They are the most numerous of all snakes.”

“Many ridiculous, frights,” says Mr. Pennant, “have happened from this innocent reptile. As every one in America is full of the dread of the Rattle-Snake, they are apt to fly at the sight of any of the serpent kind. This pursues, soon overtakes, and twisting round the legs of the fugitive,



VIPER-HEADED SNAKE.

soon brings him to the ground; but he happily receives no hurt, but what may result from the fright; all the mischief this species does is to the housewives, for it will skim their milk-pans of the cream, and rob their hen-roosts of all the eggs."

—*Arct. Zool. Append. p. 92.*

VIPER-HEADED SNAKE.

Coluber Viperinus. C. albido-griseus, fasciis transversis nigricantibus apice bifidis macula capitis bifurcata nigra, abdomine utrinque fusco maculato.

Pale-grey Snake, with blackish brown transverse bands, bifid towards their extremities, head marked by a bifurcated black spot, and sides of the abdomen spotted with brown.

Abdominal scuta 166; subcaudal scales 87.

THIS species is described by Seba, and is an animal of considerable elegance: its length is about three feet: its habit moderately slender, yet strong, and its colour very pale grey or whitish, fasciated throughout its whole length, by nearly equidistant black or very deep-brown bands, which, as in the Linnæan *Coluber Æsculapii*, are divided beneath about half way upwards by a narrow white stripe: the head is covered in front with large scales, and marked on the top by a black patch of similar form to that on the head of the Viper, except that the two divisions are more acute: on each side the head, across the eyes, is a longitudinal black stripe, communicating with the first dorsal bar; and the tip of the nose is also

the same colour: on the abdominal scuta are scattered a few small blackish or dusky spots of different size and shape: the skin is smooth and glossy. Seba considers this snake as a kind of Viper, but, according to the observations of Mr. Merrem, it is destitute of fangs, and is consequently an innocuous species. It is a native of America.

PLICATILE SNAKE.

Coluber Plicatilis. C. fusco-flavescens, subtus pallidus, fascia utrinque laterali fusco-ferruginea albido maculata.

Yellowish-brown Snake, pale beneath, with a lateral dusky stripe on each side the body marked by a row of white spots.

Coluber plicatilis. Lin. Syst. Nat. p. 376. Mus. Ad. Frid. p. 23.

Serpens Bali-Salan-Boekit. Seb. 1. t. 57. f. 5.

Abdominal scuta 131, subcaudal scales 46.

A MODERATELY large species, generally measuring between two and three feet, or more, in length: colour yellowish brown, with a dusky, and sometimes reddish, lateral stripe immediately above the scuta, formed by a row of confluent dusky spots with white centres: abdomen pale, marked with three, and sometimes four, rows of small dusky spots: head covered in front with large scales: snout obtuse: tail thick, and rather obtuse. The specimen of this snake described by Linnæus in the *Museum Adolphi Friderici* seems to have been rather small. The Count de Cepede informs us, that the specimen in the King of

France's Museum measured more than six feet in length.

CHAIN SNAKE.

Coluber Getulus. C. nigro-violaceus, fasciis angustis transversis distantibus luteis, super latera bifidis, in abdomine tessellatis.

Blackish-violet Snake, with narrow, distant, transverse, gold-coloured bands, divaricating on the sides, and tessellated on the abdomen.

Coluber Getulus. Lin. Syst. Nat. p. 382.

Chain Snake. *Catesb. Carol. 2. pl. 52.*

Abdominal scuta 215, subcaudal scales 44.

ONE of the most elegant of the North American snakes, as well as the most singular in its pattern: its general length is about three feet, and its proportions nearly those of the common English Snake: the colour of the whole animal is an extremely deep violet, so dark as to appear black on a cursory view, while throughout the whole length, from the head to the end of the tail, are regularly disposed numerous, equidistant, transverse rings or narrow bands of a bright yellow colour, each dividing on the sides before it passes under the abdomen, and being of an irregularly angular outline, more especially on the abdomen, which, in consequence, appears as if tessellated with square yellow spots: the head is small, of a somewhat angular shape, and covered in front, as in most other innocent snakes, with large scales: the tail is of moderate length, measuring about a fifth part of the whole, and gradually tapers

to the extremity. This snake is found in Carolina, Virginia, &c. frequenting moist woods, and shady places, and preying on Lizards, &c. In the British Museum is a large specimen which appears to have been taken in the act of swallowing a pretty large lizard (*Ameiva*), and in consequence of which the jaws are full as much dilated as those of the *Coluber corallinus* figured in a similar situation by Seba, and represented also in the present work.

BROAD-NOSED SNAKE.

Coluber Platurinus. C. albus fusco-maculatus, corpore fuscis latis fuscis annulato.

White Snake, spotted with brown, and annulated with broad brown zones.

Serpens Guineensis rarissima Millio dicta. Seb. 2. t. 83. f. 3?

A HANDSOME species: habit somewhat resembling that of the *Col. Natrix*, but the tail rather more slender in proportion: back slightly carinated, sides somewhat sloping, and abdomen flattish: colour of the whole animal an equal variegation of broad blackish-brown and white bands, equidistant from each other, and entirely surrounding the respective parts: the white bands are spotted with black: head rather large than small, covered with large scales of a black-brown colour, elegantly separated from each other by intervening white spaces, so that the head appears marked with large black spots on a white ground:

nose abrupt or truncated: tail very long, slender, and gradually tapering to the extremity: length of the whole animal about three feet and a half: scales of moderate size, ovate, and not carinated. Described from a specimen in the Museum of Dr. William Hunter. Native country unknown.

FULVOUS SNAKE.

Coluber Fulvus. *C. fulvus, fusco maculatus, corpore fasciis nigris annulato, cauda brevissima.*

Fulvous Snake, spotted with brown, and annulated with blackish zones, with very short tail.

Coluber fulvus. *Lin. Syst. Nat. p. 381.*

Abdominal scuta 218, subcaudal scales 31.

VERY much allied in the disposition of its colours to the preceding; the body being marked by alternate black and yellowish zones, the yellowish parts spotted with ferruginous: length about a foot and half: tail very short, being scarcely more than a twelfth of the whole length: the head is brown above, and covered with large scales. Native of North America.

SHORT-TAILED SNAKE.

Coluber Brachiurus. C. ferrugineus, subtus albidoflavescens, squamis subhexagonis, cauda obtusa brevissima.

Ferruginous Snake, yellowish white beneath, with subhexagonal scales, and extremely short obtuse tail.

Coluber albus? *Lin. Syst. Nat. p. 378. Mus. Ad. Frid. p. 24. t. 14. f. 1.*

Stumpfschwänzige Natter. *Merrem Beytr. 2. p. 36. t. 37.*

Abdominal scuta 170, subcaudal scales 26.

DESCRIBED from a specimen in the Museum of Dr. William Hunter. Length about a foot and half: habit resembling that of the genus *Anguis*: head of similar diameter with the neck and body, but slightly tapering at the nose, and covered in front with large scales: those on the remainder of the upper parts all hexagonal, and rather large in proportion to the size of the animal: colour ferruginous brown, the skin appearing between the scales: beneath yellowish white: scuta narrow: tail extremely short, scarce measuring two inches, and tapering pretty suddenly to an obtuse point. Native country unknown.

This seems to be the species described and figured by Mr. Merrem under the title of *Stumpfschwänzige Natter*, and which he, with great probability, supposes to be the *Coluber albus* of Linnæus, the description in the *Museum Adolphi Frederici* agreeing in all particulars except that of colour, and it appears pretty clearly that Linnæus

must have described a specimen which had lost its colour by being long preserved in spirits. Its native country, according to Linnæus, is India.

BLUE-GREEN SNAKE.

Coluber Viridissimus. C. cæruleo-viridissimus, dorso subpurpurascente, abdomine subalbente, scutis medio dilatatis.

Vivid blue-green Snake, with a tinge of purple on the back, and whitish abdomen with the scuta dilated towards the middle.

Coluber viridissimus. Lin. Syst. Nat. p. 388. Mus. Ad. Frid. 2. p. 46.

Serpens Surinamensis Flosculus dictus. Seb. 2. t. 67. f. 1, 2.

Serpens Americana cærulea Dipsas dicta? Seb. 2. t. 3. f. 2.

Abdominal scuta 217, subcaudal scales 122.

A VERY elegant species, of middling size, growing to the length of about three feet: head slightly obtuse, of moderate size, covered with very large scaly plates: remainder of the upper parts with ovate scales: colour of the whole animal a very fine strong blue-green, with a suffusion of purple combined, especially towards the back: abdomen pale or whitish green: tail of moderate length, and slender. Linnæus observes that the abdominal scuta are of a wider or more dilated form in the middle than in other snakes: the colour appears to vary, so as to exhibit more or less of the blue tinge, which sometimes becomes the predominant colour, and in such specimens the abdomen is paler or whiter than in others. There can be little doubt but that the specimens figured on plate 67

of the second volume of Seba, under the name of *Flosculus*, are of this kind; the colour being pale blue, with a slight tinge of violet down the back, and the abdomen white. This beautiful snake is a native of Surinam, and is a harmless species.

LUTRIX SNAKE.

Coluber Lutrix. *C. plumbeus, dorso aurantio, abdomine flavo.*

Lead-coloured Snake, with orange-coloured back and yellow abdomen.

Coluber Lutrix. *Lin. Syst. Nat. p. 275.*

Serpens eximia Africana crocea, fronte albo. *Seb. 2. t. 86. f. 5.*

Duberria. *Seb. 2. t. 1. f. 6?*

Abdominal scuta 134, subcaudal scales 27.

THIS is a small but elegant Snake, usually measuring nine or ten inches or near a foot in length, and being rather thick in proportion: the colour is described by Linnæus as yellow above and beneath, and blueish on the sides: he quotes, however, no figure as a representative of the species, but it is probably the *Serpens eximia Africana crocea fronte albo* of Seba, vol. 2. pl. 86. f. 5. which is said by that author to be of an orange-colour above, with the upper part of the head and the abdomen white. It also seems to be the *Duberria* of the same author, figured at pl. 1. f. 6. which is described as blue above, with a middle range of small red specks, brown on the sides, and cinereous yellow beneath, and supposed by Seba to be a native of Ceylon, as the orange-

coloured one was of Africa. Linnæus assigns India as the native country of his animal. It probably varies in colour, a specimen in the British Museum being entirely of a lead-colour above, and white beneath: the scuta very narrow, and forming a white vitta or band down the whole under part of the animal, edged on each side by a line of subtrigonal black spots with descending points; the whole agreeing most accurately with the first-mentioned figure in Seba, though differing as to colours. To this I may add, that in Sir Hans Sloane's copy of that work, now in the British Museum, the above figure is coloured as in the specimen just mentioned, in opposition to the printed description of the author, in which there may probably have been some mistake.

VAR. ?

Schmahlbauchigte Natter. *Merrem Beytr.* 1. p. 7. t. 1.

THIS, which is described and figured by Merrem, is perhaps no other than a variety of the *Lutrix*, differing only in having the tail rather more obtuse than in the Seban figures above mentioned: its colour is said by Merrem to be pale chocolate-brown above, blueish on the sides, and yellow on the abdomen; the abdominal scuta 117, and the subcaudal scales 38.

GRAPHIC SNAKE.

Coluber Graphicus. C. cinereus, supra lineis nigricantibus characteriformibus notatus, abdomine pallido fusco variato.

Cinereous Snake, marked above with blackish characteriform lines, and pale abdomen variegated with brown.

Serpens de Moculo Americana. *Seb. 2. t. 75. f. 3. ?*

Abdominal scuta 143, subcaudal scales 73.

SIZE of *Berus*: colour above glaucous, with a tinge of ferruginous, and marked all over the back and sides with narrow black characteriform streaks in different directions, and edged on their exterior side with small longitudinal whitish marks, the edges of the scales being of that colour: abdomen pale or white, the edges or sides of the scuta (and in some parts the middle) marked with large square blackish-brown patches: tail long and slender, abdomen separated from the upper parts by a very distinct side-line: head scarce larger than the neck, of a longish form, and covered with large scales: behind each eye a large and long triangular dark patch, including an oval white one: described from a specimen in the British Museum. It also occurs in the Museum of Dr. Hunter.

COACH-WHIP SNAKE.

Coluber Flagellum. C. longissimus, gracillimus, fuscus, abdomine pallido.

Extremely long, slender, brown Snake, with pale abdomen.

Coach-Whip Snake. *Catesb. Carol. 2. pl. 54.*

THIS is a very long and slender species, measuring from four to six feet or more in length: its colour is an uniform dusky brown, palest beneath: it is, according to Catesby, its first describer, "very active and nimble, running very swiftly: inoffensive; yet the Indians report, not without gaining many proselytes to their silly belief, that it will, by a jerk of its tail, separate a man in two parts." It is a native of North America, and not uncommon in Carolina and Virginia.

CENCHOA SNAKE.

Coluber Cenchoa. C. albidus gracilis, fasciis transversis rhombæatis fuscis, capite subgloboso.

Slender whitish Snake, with transverse rhomboidal brown bands, and subglobose head.

Coluber Cenchoa. Lin. Syst. Nat. p. 389.

Anguis de Cenchoatl Americanus. Seb. 2. t. 16. f. 2, 3.

Abdominal scuta 210, subcaudal scales 124.

A REMARKABLE species, growing sometimes to the length of three or even four feet, yet scarcely exceeding the thickness of a swan quill: head very large, and nearly globular: neck extremely

thin: tail very long, measuring near a third part of the whole animal, and gradually tapering to the extremity: colour white or yellowish, marked throughout the whole upper part from head to the end of the tail, with numerous transverse rhomboidal bars or patches of brown, the points descending on each side.

CLOUDED SNAKE.

Coluber Nebulatus. *C. subfulvescens maculis irregularibus fuscis nebulatus, abdomine pallido fusco maculato.*

Yellowish Snake, clouded with irregular brown spots, with pale abdomen speckled with brown.

Coluber nebulatus. *Lin. Syst. Nat. p. 388.*

Serpens Ceilonica maculata. *Seb. 1. t. 100. f. 4.*

Serpens Dipsas lentiginosa Amboinensis. *Seb. 2. t. 44. f. 2?*

Abdominal scuta 185, subcaudal scales 81.

SIZE moderate, measuring about two feet in length: habit rather slender: head rather large, and covered with large scales: tail of middling length, tapering rather suddenly from the body, and gradually decreasing to the tip: colour of the whole animal yellowish brown, clouded with irregular deep-brown or blackish variegations, forming a sort of bands nearly surrounding the body, with smaller spots and frecklings intermixed: under parts pale, speckled with brown: native of America: well figured in the work of Seba. The *Coluber Zeylonicus*, of the Gmelinian edition of the *Systema Naturæ* can hardly be considered as distinct from the present species.

ORNAMENTED SNAKE.

Coluber Ornatus. *C. nigerrimus, maculis albis flosculosis abdomine albo.*

Jet-black Snake, with white flower-shaped spots and white abdomen.

Serpens Jaculus Amboinensis perelegans. *Seb. 2. t. 7. f. 1.*

Serpens Ceilanica pomposa veste ornata. *Seb. 2. t. 61. f. 2.*

Serpens Ceilonica elegantissima. *Seb. 1. t. 94. f. 7.*

A VERY elegant and singular species: habit long and flagelliform; measuring about three feet or more in length: colour of the upper parts jet black, with white variegations, of which those on the head and fore parts, for the length of a few inches, generally consist of transverse white bars, while those on the remainder are disposed into the form of rounded or ovate spots of different sizes, and representing either rosaceous or tetrapetalous flowers scattered over the surface, and accompanied by smaller simple spots and specklings: abdomen white: head rather small than large, and of a longish form; tail rather long, slender, and tapering to a sharp point: native of some of the West-Indian islands, Martinico, &c. and, according to Seba, of the East-Indian islands also, as Ceylon and Java. The pattern varies a little in different individuals, but the general appearance is very similar in all.

VAR.?

SEBA describes and figures a snake extremely allied to the above in general appearance and proportions, but of very different colours; the ground-colour being a yellowish green, with the upper parts not variegated with floscular spots, but by numerous, short, double, red, transverse bands: a snake of this kind is preserved in the British Museum, but, from having been long preserved in spirits, exhibits only a yellowish white ground-colour with dusky variegations. See Seba 2. t. 56. f. 1.

PINTADO SNAKE.

Coluber Meleagris. *C. niger, albo confertim punctatus, abdomine albo.*

Black Snake, thickly speckled with white, and with white abdomen.

Serpens Ceilonica excellentissima eleganter picta. *Seb. 2. t. 32. f. 2.*

Serpens Babylonica Cenchrus dicta. *Seb. 2. t. 52. f. 3.*

Serpens Hispalensis frontem præ se ferens venustissimam. *Seb. 2. t. 56. f. 2.*

ALLIED in some degree to the preceding, but a perfectly distinct species: habit long and slender, measuring about two feet in length: colour above jet black, marked in a rhomboid pattern with numerous small roundish white specks, regularly disposed by fours over the whole upper surface, till

the commencement of the tail, where they become single, and are scattered over that part to the tip: abdomen white: head rather small and short, but rather sharp-snouted: white, with black variegations, a stripe passing across the nose, and a second across the eyes: the beginning of the neck, or rather the back part of the head, marked by a pair of short longitudinal white streaks; tail of moderate length, tapering rather suddenly from the vent, and from thence gradually to the tip: described from a beautiful specimen in the Leve-rian Museum: Seba represents this species as a native of Ceylon, &c.

MILIARY SNAKE.

Coluber Miliaris. *C. fuscus, albo punctatus, abdomine albo.*

Brown Snake, speckled with white, and with white abdomen.

Coluber Miliaris. *Lin. Syst. Nat. p. 380.*

Abdominal scuta 162, subcaudal scales 59.

LENGTH about a foot and half: thickness of a finger: colour on the upper parts brown, each scale marked by a white spot: beneath white: head ovate, with glaucous scales blackish in the middle: lips marked by dusky streaks: tail about a fifth of the whole length, and not very slender: native of South America.

PEARLY SNAKE.

Coluber Perlatus. *C. perlaceus, capite caudaque thalassinis, vertice rubro,*

Pearl-coloured Snake, with sea-green head and tail; the former marked by a red spot.

Serpens ex Nova Hispania, a *J. Fabro Lynceo*, p. 774, delineata & descripta sub nomine Hispanico *Iztag*. *Seb. 2. t. 57. f. 2.*

LENGTH about two feet and a half: habit rather thick than slender, except towards the end of the tail, which gradually tapers to a very slender point: body pearl-coloured, the edges of the scales being black; thus forming reticular crossings of that colour: head large, of a sea-green colour, and covered with small scales, except about the nose, and between the eyes; on the top of the head a large deep red spot pointing backwards: tail of moderate length, sea-green, with a few distant, scattered black spots: abdomen grey: native of New Spain,

MARBLED SNAKE.

Serpens bucculenta Bæotica. *Seb. 2. t. 57. f. 3,*

LENGTH about three feet, and rather thick in proportion to its length: colour of the upper parts brown, variegated with white clouds: abdomen clouded in a similar manner: head rather thick, covered with large scales: those on the body ra-

ther large and of an ovate shape: tail about a third of the whole length, very thick at its origin, but gradually tapering to a slender point: native of Bœotia.

AMMOBATES.

Coluber Ammobates Africanus ex Guinea. Seb. 2. t. 78. f. 2.

LENGTH about three feet and a half, and moderately thick in proportion: colour a uniform deep blueish grey, both above and beneath, with a row of moderately distant, round, dusky spots on each side the body near the abdomen: head rather large, covered with large scales, and of a rufous brown above: the scales on the whole upper parts of the body and tail are rather large, of an ovate shape, and finely fimbriated on the edges; tail of moderate length, and tapering to the extremity, but not very slender: native, according to Seba, of Guinea.

CROSSED SNAKE.

Coluber Crucifer. *C. albus serie dorsal triplici macularum nigrarum, intermediis cruciatis.*

White Snake, with a triple dorsal series of black spots, those of the middle range cross-shaped.

Serpens Ceilonica crucifera. *Seb. 2. t. 12. f. 2.*

Perlfarbne Natter. *Merrem Beytr. 2. t. 9.*

Abdominal scuta 184, subcaudal scales 66.

A SMALLISH species, of about a foot and a half in length: head rather small, and covered with large scales: neck slender: body of moderate thickness: tail tapering gradually to the extremity, which is slightly pointed: colour of the whole animal white, with a pearly tinge, and marked along the back by a series of small black spots in the form of a St. Andrew's Cross: along each side is also a row of black spots, but less distinctly cross-shaped than those of the middle range: abdomen white, each fourth or fifth scutum being marked at its edge or juncture with the sides by a black spot: head marked by black sutures. This species is, according to Seba, a native of Ceylon.



PERUVIAN SNAKE.

PERUVIAN SNAKE.

Coluber Peruvianus. C. albo nigroque variatus, abdomine rosco.

Black-and-white Snake, with rose-coloured abdomen.

Serpens Peruviana elegantissima & rara. Seb. 2. t. 21. f. 1.

THIS highly elegant Snake is described by Seba, who informs us that it is a native of Peru, and a rare species in European collections: the upper part of the animal is variegated with black and white spots and marks; the sides tinged with yellowish red, while the belly or under part is of a light red or rose-colour: it is said to be an innocent species, and to be chiefly found in New Spain: it is one of those snakes which do not appear to be described by Linnæus, nor is the number of its scuta and squamæ known: its size seems to be nearly that of the common English Snake, but its form is rather thicker in proportion. Mr. Merrem considers it as a variety of the *Colluber pullatus*, but the peculiar form of its scales, and some other circumstances, seem to forbid this supposition. The original specimen itself seems to have been in the Linkian collection at Leipzig; since it is figured, apparently from the same drawing with Seba's, in the *Physica Sacra* of Scheuchzer, vol. 7. t. 630.

BANDED SNAKE.

Coluber Pethola. C. fusco-ferrugineus fasciis transversis angustis albidis, abdomine alido,

Ferruginous-brown Snake, with narrow transverse whitish bands, and whitish abdomen.

Coluber Pethola. Lin. Syst. Nat. p. 387.

Coluber petalarius. Lin. Syst. Nat. p. 387. Mus. Ad. Frid. p. 35. t. 9. f. 2?

Abdominal scuta 209, subcaudal scales 90.

LENGTH from two to four feet: colour brown or ferruginous above; pale or white beneath; the colour of the upper part being transversely divided at equidistant intervals by narrow stripes or lines of white running upwards from the abdomen across the back, and thus marking the brown upper part into so many extremely broad zones: head rather small, covered in front with large scales, and marked above by a large, oblong, brown patch: tail of moderate length, tapering to a fine point. This species occasionally varies as to the form of its zones, which in some specimens appear rather like rhomboid transverse patches. It is a native of Africa. The *C. Petalarius* of the *Mus. Ad. Frid.* can hardly be considered as a species distinct from this.

LEMNISCATED SNAKE.

Coluber Lemniscatus. C. albo-flavescens, zonis triplicatis fusco-ferrugineis.

Yellowish-white Snake, with triple ferrugineous-brown bands.

Coluber lemniscatus. Lin. Syst. Nat. p. 286.

Serpens, &c. Seb. 2. t. 10. f. 4.

Serpens annulatus, &c. Seb. 1. t. 27. f. 4.

Abdominal scuta 250, subcaudal scales 35.

THIS is a species of considerable elegance, being of a slender habit, and of a white or yellowish colour, marked throughout the whole length, at equal distances, by triple zones of black or deep brown entirely surrounding the body, and each separated from the next adjoining one by a narrow white stripe or line of the ground-colour: the head is rather small, covered with large scales and marked across the snout by a double zone, of which the smallest division passes across the nostrils, and the largest across the eyes: the tail is rather short, and gradually tapers to the tip: the whole animal is of a smooth or shining surface: it sometimes varies in the colour of its zones, which, in a specimen represented by Seba, are purple. It is a native of several parts of Asia.

LINNÆAN SNAKE.

Coluber Linnæi. C. albidus, zonis transversis nigris sub-bifidis, abdomine nigro variato.

Whitish Snake, with black sub-bifid transverse zones, and abdomen variegated with black.

Coluber Æsculapii. Lin. Syst. Nat. p. 380.

Serpentis Æsculapii species. Seb. 2. t. 18. f. 4.?

Serpens Ceilanica, &c. Seb. 2. t. 76. f. 2.

Abdominal scuta 180, subcaudal scales 43.

THIS is much allied in appearance to the *lemniscatus*, generally measuring about a foot and half, or two feet in length: its colour is pale or whitish, with a more obscure cast on the back, and is marked throughout by nearly equidistant black bands, each surrounding the body and divided half way up from the abdomen by a line or narrow stripe of the ground-colour; thus giving a bifid appearance to the lower part of each band: the abdomen is marked into black squares by the alternation of the bands beneath: the head is covered with large scales, and marked on the fore part by a transverse black zone running across the eyes, and at the hind part by a somewhat broader band: the tail is of moderate length, and gradually tapers to a somewhat obtuse point. This snake is a native of South America, but is also said to occur in some parts of Asia. It is by Linnæus termed *Coluber Æsculapii*, but since it is not very probable that it should have been the species dedicated to that deity by the ancients, there seems to be a

peculiar absurdity in the Linnæan trivial name, which is therefore purposely changed.

GLOSSY SNAKE.

Coluber Lubricus. *C. albus, zonis æquidistantibus nigris.*

White Snake, with equidistant black bands.

Coluber lubricus. *Lin. Syst. Nat. Gmel. p. 1101.*

Anguis lubricus Africanus, &c. Seb. 2. t. 43. f. 3.

ALLIED to the *C. Æsculapii* and *lemniscatus*, but marked by single, equidistant, black bands: ground-colour white: head marked across the snout by a black band, and at the top by two oblique stripes nearly meeting at an angle in front: length about a foot and half: skin remarkably smooth and glossy: native, according to Seba, of Africa.

HYGEIAN SNAKE.

Coluber Hygeiæ. *C. albus, zonis subundulatis nigris, capite longitudinaliter nigro fasciato.*

White Snake, with subundulated black zones, and head fasciated longitudinally with black.

Serpens Siamensis tæniolis, &c. Seb. 2. t. 34. f. 5.

Hygiæns Natter. Merrem Beytr. 1. p. 24. t. 6.

A SMALLISH species, of a white colour, barred with numerous and somewhat irregular black bands nearly surrounding the body, and in some parts alternating: head small, large-scaled, and

marked by two broad longitudinal streaks uniting at the top of the snout: tail rather short and sharp-pointed. In the specimen described by Mr. Merrem a narrow dorsal reddish line is continued from head to tail, which is wanting in Seba's specimen. Native, according to Seba, of Siam.

DOMICELLA SNAKE.

Coluber Domicella. C. albus, fasciis transversis numerosis nigerrimis, subtus alternatim concurrentibus, linea abdominali nigricante.

White Snake, with numerous jet-black transverse bands meeting beneath, and a blackish abdominal line.

Anguis bicolor elegantissimus Malabaricus. Seb. 2. t. 54. f. 1.

Coluber Domicella. Lin. Syst. Nat. p. 376.

Var. Coluber. picatus. Nat. Misc. vol. 9. pl. 340.

Abdominal scuta 118, subcaudal scales 60.

A VERY elegant and harmless species, of a slender habit in proportion to its length, measuring about two feet or two feet and a half in length, and about half an inch in diameter: colour milk-white, beautifully marked throughout the whole length by very numerous, equidistant, jet-black bands, attenuated on the sides, nearly meeting in an alternate manner under the abdomen, which is also marked by a continued wavy black line through the middle of all the scuta: head very small, covered with large scaly plates, and black, with a middle line of white at the back part: tail rather short, and gradually tapering to a point. Native of India: admirably figured in the work of Seba.

This species appears to vary considerably in the number of its *scuta* and *squamæ subcaudales*. It is pretended that the ladies in India sometimes carry this snake in their bosoms, and hence its trivial name *Domicella*.

CHEQUERED SNAKE.

Serpens Mexicana *Petlacoatl* dicta elegantissima. *Seb. 2. t. 63. f. 1.*

LENGTH about three feet or more: general proportions those of the *Natrix*: colour of the upper parts yellow, crossed obliquely by red lines, in such a manner as to divide the whole surface into numerous squares or lozenges, consisting of four scales each: head rather small, and oblong; covered in front with large red scales: tail of moderate length, and gradually tapering to a very slender extremity: abdomen cinereous-yellow, with a few smallish tessellated red patches here and there. Native of Mexico. In the general disposition of its markings this snake is much allied to the *Paragoodo*, pl. 20. of Dr. Russel's Indian Serpents (*Hydrus palustris*. Schneid.) but must be a different species.

BLACK-HEADED SNAKE.

Coluber Melanocephalus. *C. subfuscus, subtus albidus, capite nigro albo striato, fascia collari nigra.*

Brownish Snake, whitish beneath, with black head striped with white, and a black band over the neck.

Coluber melanocephalus. *Lin. Syst. Nat. p. 378. Mus. Ad. Frid. p. 24. t. 15. f. 2.*

Abdominal scuta 140, subcaudal scales 62.

A SMALL species, of about a foot and a half in length: colour pale brown, whitish beneath: head black, with white divisions or streaks on the top and sides, and immediately behind the head is a broad black collar. Native of America? This species appears to vary greatly in the number of its scuta and subcaudal scales.

ANNULATED SNAKE.

Coluber Annulatus. *C. griseus, maculis dorsalibus rotundis fuscis pallido marginatis.*

Grey Snake, with round brown dorsal spots, with pale margins.

Coluber annulatus. *Lin. Syst. Nat. p. 386. Mus. Ad. Frid. p. 34. t. 8. f. 2.*

Vipera Virginiana maculis notata. *Seb. 1. t. 72. f. 6. and 2. t. 13. f. 2.*

Abdominal scuta 190, subcaudal scales 96.

LENGTH about two feet or more: colour grey, with the back marked by a longitudinal series of round or ovate deep brown spots surrounded with pale margins, and becoming occasionally con-

fluent, especially to some distance down the neck : head rather large than small, and covered with large scales : tail of moderate length, and gradually tapering. Native of America. Appears to vary greatly in the number of abdominal and subcaudal scales.

DIPSAS.

Coluber Dipsas. *C. cæruleus, subtus albidus, squamis margine albidis.*

Blue Snake, whitish beneath, with the scales whitish on the edges.

Coluber Dipsas. *Lin. Syst. Nat. p. 386.*

Abdominal scuta 152, subcaudal scales 135.

A RATHER small species : length about a foot and half or two feet : colour bright blue, paler beneath : scales, according to Linnæus, edged with white, and the tail, which is slender and sharp-pointed, marked beneath by a blueish suture : the head rather large, somewhat angulated, ovate-oblong, and obtuse : colour sometimes blueish green : native of Surinam, and said to be a poisonous species. This snake, being avowedly a native of America, is not very happily named by Linnæus ; the *Dipsas* of the ancients being an African Serpent.

NECKLACE SNAKE.

Coluber Monilis. *C. albidus, supra fasciis latis fuscis, collo supra maculis tribus albis.*

Whitish Snake, marked above by broad brown bands, and with three white spots on the neck.

Coluber Monilis. *Lin. Syst. Nat. p. 381.*

Abdominal scuta 164, subcaudal scales 82.

A SMALL species, measuring about a foot and half in length: colour whitish, banded throughout the whole length with very broad transverse brown zones: abdomen plain: head of moderate size, whitish, bordered with brown, and marked by three lengthened brown spots: on the upper part of the neck are three round white spots, forming as it were a half collar on that part: this species is a native of South America.

 RING-BANDED SNAKE.

Coluber Doliatus. *C. lacteus, annulis dorsibus oratis, approximatiss, nigris.*

Milk-white Snake, marked above by large, approximated, oval black rings.

Coluber doliatus. *Lin. Syst. Nat. p. 275.*

Magpie Snake. *Naturalist's Miscellany, vol. 7. pl. 254.*

Abdominal scuta 164, subcaudal scales 43.

A SMALL, but highly elegant, species: general length a foot and half, or two feet: colour milk-white, with a slight cast of cream-colour above, and marked down the whole length by large, oval, jet-black rings, the ends of which approaching

each other on the top of the back, give the appearance of double bars: in some specimens the sides of the body are marked by blackish spots between each of the oval rings. This is a perfectly harmless species, and is a native of Carolina and other parts of North America.

COBELLA SNAKE.

Coluber Cobella. *C. fuscus, fasciis transversis linearibus curvatis albidis, abdomine albo fasciis transversis fuscis.*

Brown Snake, with linear transverse whitish curved bands, and white abdomen with transverse brown bands.

Coluber Cobella. *Lin. Syst. Nat. p. 378.*

Serpentes Cobellas dictæ. *Seb. 2. t. 2. f. 5.*

Abdominal scuta 150, subcaudal scales 54.

A SMALL species: general length about ten or twelve inches: colour brown, with numerous curved or undulating, whitish, transverse, linear bands from head to tail: abdomen white or pale, with numerous, alternate, semi-transverse, dusky bands: head of middling size, covered with very large scales: tail thin and taper. This snake varies sometimes in colour, being blackish rather than brown, with similar whitish or pale markings.

ROUGH SNAKE.

Coluber Scaber. *C. griseus, fusco maculatus, squamis elevato-carinatis.*

Grey Snake, spotted with brown, with the scales carinated by a rising point.

Coluber Scaber. *Lin. Syst. Nat. p. 385. Mus. Ad. Frid. p. 36. t. 10. f. 1.*

Rauhe Natter. *Merrem. Beytr. 1. p. 34. t. 9.*

Abdominal scuta 228, subcaudal scales 44.

LENGTH about a foot and half: habit slender: head small, and marked at the back or neck with a few transverse streaks: the scales on the remainder of the animal small, and marked by a rising point on the back of each: thus causing a very perceptible roughness on the skin: colour grey, marked throughout with a triple row of somewhat irregularly rhomboid and alternate brown spots with paler centres: abdomen pale, and marked on the sides with minute characteriform brownish streaks: tail slender: native of India.

ALGERINE SNAKE.

Coluber Maurus. *C. fuscus, lineis duabus dorsalibus nigris, lateribus nigro transversim fasciatis, abdomine atro.*

Brown Snake, with two black dorsal lines, the sides transversely fasciated with black, and black abdomen.

Coluber maurus. *Lin. Syst. Nat. Gmel. p. 1098.*

Abdominal scuta 152, subcaudal scales 66.

OF middle size: colour on the upper parts brown, with two black dorsal lines, from which descend on each side several black bands: abdomen black: native of Algiers.

 HANNASCH.

SLIGHTLY described by Forskal, who tells us that it is entirely black, about a cubit in length, of the thickness of a finger, and that its bite excites a swelling, though no otherwise dangerous: native of Arabia.

 RED-THROATED SNAKE.

Coluber Jugularis. *C. niger, jugulo sanguineo.*

Black Snake, with blood-red throat.

Abdominal scuta 195, subcaudal scales 102.

COLOUR entirely black, except the throat, which is blood-red: native of Ægypt: described by Hasselquist.

SIPEDON.

Coluber Sipedon. *Lin. Syst. Nat. p. 379.*

NATIVE of North America: observed by Kalm: colour entirely black, or deep brown: abdominal scuta 144, subcaudal scales 73.

 RED-SPOTTED SNAKE.

Coluber Coccineus. *C. niger, dorso flavo maculis rubris, abdomine pallido.*

Black Snake, with yellow back spotted with red, and pale abdomen.

Coluber coccineus. *Lin. Syst. Nat. Gmel. p. 1097.*

Abdominal scuta 175, subcaudal scales 35,

LENGTH from two to three feet or more: habit rather slender: head small: ground-colour black, with about twenty-three bright red ovate or obtusely square spots along the back; the spaces between being yellow: belly pale: native of South America.

SPOTTED-SIDE SNAKE.

Coluber Ordinatus. C. cæruleo-virescens, linea spinali albida, lateribus fusco-maculosis.

Blueish-green Snake, with whitish spinal line, and sides spotted with brown.

Coluber ordinatus. Lin. Syst. Nat. p. 379.

Green Spotted Snake. *Catesb. Carol. 2. pl. 53.*

Spotted Ribband Snake? *Catesb. 2. pl. 51.*

Abdominal scuta 138, subcaudal scales 72.

GENERAL length from two to three feet: colour blueish green, with blackish clouds and spots along the sides: ridge of the back whitish: native of Carolina.

WHITE-SKINNED SNAKE.

Coluber Candidus. C. candidus, maculis dorsalibus ovatis magnis fuscis.

White Snake, with large ovate brown dorsal spots.

Coluber Candidus. Lin. Syst. Nat. p. 384. Mus. Ad. Frid. p. 33. t. 7. f. 1.

Serpens Æculapii Brasiliensis. Seb. 2. t. 66. f. 3, 4.

Abdominal scuta 220, subcaudal scales 50.

HABIT rather slender: length from two to three or four feet, or more: colour milk-white, marked throughout with a row of very large, ovate, deep-brown, equidistant spots or patches: each of the white scales on the plain parts is also marked in the middle with a brown speck: head brown, and covered with large scales: tail of moderate length,

gradually tapering to the extremity: native of South America.

BROWN SNAKE.

Coluber Fuscus. C. cinereo-fuscus, abdomine pallido, macula postoculari fusca.

Cinereous-brown Snake, with pale abdomen, and brown spot behind the eyes.

Coluber fuscus. Lin. Syst. Nat. p. 388. Mus. Ad. Frid. p. 32. t. 17. f. 1.

Seb. 2. t. 71. f. 1. t. 72. f. 1. and t. 87. f. 1.

Abdominal scuta 149, subcaudal scales 117.

A MODERATELY large species, growing to four feet or more in length: colour cinereous brown, sometimes tinged with blueish, or with olive colour, or ferruginous: abdomen pale: head rather small than large, and marked behind the eyes with an oblong brown patch: tail about a fifth of the whole length, gradually tapering to a point. Native of several parts of Asia.

GREY SNAKE.

Coluber Canus. *C. canus, fasciis transversis obscuris, lateribus albo punctatis.*

Grey Snake, with obscure transverse brown bands, and sides speckled with white.

Coluber canus. *Lin. Syst. Nat. p. 382. Mus. Ad. Frid. p. 31. t. 11. f. 1.*

Abdominal scuta 188, subcaudal scales 70.

DESCRIBED by Linnæus in the Museum Adolphi Friderici: the specimen was about a foot long, and of scarcely a finger's thickness: head ovate, angular, and covered with large scales: body grey, with obscure brownish transverse bands, on each side of which are two white specks, thus constituting a row on each side the body near the abdomen: tail about a fifth of the whole length, slender, and round: native of South America.

 CAPE SNAKE.

Serpens Africana annulata, ex promontorio Bonæ Spei. *Seb. 2. t. 46. f. 4.*

LENGTH about two feet: colour above pale blue, with numerous moderately distant, double, red bands, like those of the Linnæan *C. Æsculapii*, but narrower, surrounding the body: head small, covered with large scales, and marked by a broad red band passing across the eyes; at the back of the head by a much broader band: abdomen pale rufous: tail of moderate length, gradually tapering

to a sharp point: native, according to Seba, of the Cape of Good Hope.

ANGULAR SNAKE.

Coluber Angulatus. C. subfuscus, fasciis transversis lanceolatis nigricantibus, subtus alternatim concurrentibus.

Brownish Snake, with broad transverse lanceolate blackish bands, meeting alternately beneath.

Coluber angulatus. Lin. Syst. Nat. p. 377.

Serpens vel Sepedon Americanus. Seb. 2. t. 73. f. 1?

Abdominal scuta 117, subcaudal scales 70.

LENGTH from two to three feet: colour pale brown, with broad, equidistant, transverse, blackish lanceolate fasciæ throughout the whole length, continued round the body, but in an irregular or alternating manner beneath the abdomen: head rather small, and covered with large scales; those on the rest of the body of moderate size, and disposed into about nineteen longitudinal rows; and as each scale is pretty strongly carinated, the body appears as it were polygonal or angular: tail of moderate length, and gradually tapering to the tip: native of the East Indies, according to Linnæus, but, if a snake described in Seba and quoted by Linnæus, be really the same species, it occurs also in South America: it is observed to vary considerably in the number of its abdominal and subcaudal scales.

CÆRULEAN SNAKE.

Coluber Cæruleus. *C. cærulescens, squamis altero latere albis, abdomine albo.*

Blueish Snake, with the scales white on one side, and white abdomen.

Coluber cæruleus. *Lin. Syst. Nat. p. 377.*

Abdominal scuta 165, subcaudal scales 24.

ALLIED in colour to the Linnæan *Dipsas*, being blue above, with the lower margin of the scales white: abdomen white: head of moderate size: tail rather short, slender, and tapering to the tip: general length about a foot and a half or two feet: native of South America.

LIVID SNAKE.

Coluber Saturninus. *C. lividus, fasciis angustis transversis cinereis.*

Livid Snake, with narrow transverse cinereous bands.

Coluber Saturninus. *Lin. Syst. Nat. p. 384. Mus. Ad. Frid. p. 32. t. 9. f. 1.*

Abdominal scuta 147, subcaudal scales 120.

DESCRIBED by Linnæus in the Museum Adolphi Friderici: head broader than the body, depressed, oblong, lead-coloured: eyes very large: trunk livid, somewhat clouded above with narrow cinereous bands: tail round, and measuring about a third of the whole animal: a harmless species: native of South America: length about two feet: habit rather slender.

RED BEAD SNAKE.

Coluber Guttatus. C. niger, dorso flavo maculis rubris, abdomine fusco variegato.

Black Snake, with yellow back spotted with red, and abdomen variegated with dusky.

Coluber Guttatus, Lin. Syst. Nat. p. 385.

Bead Snake. *Catesb. Carol. 2. t. 60.*

Abdominal scuta 227, subcaudal scales 60.

DESCRIBED by Catesby: general length about two feet, but grows to a much greater length: ground-colour black, deepest on the back and faintest on the belly, where it is disposed into a kind of squarish variegations: the upper part of the body is adorned with large spots of a bright red colour, between which, at regular distances, are yellow spots: the sides are spotted with black: the tail measures about a sixth of the whole length. This species is a native of Carolina, and, according to Catesby, resides under ground, being rarely seen on the surface, but is often dug up in digging for potatoes, &c. and is a perfectly harmless animal. It seems greatly allied, except in the number of abdominal and subcaudal scales, to the *Red Spotted Snake* before described.

DOUBTFUL SNAKE.

Cobra Americana. Seb. 2. t. 21. f. 3.

LENGTH about fifteen inches, and moderately thick in proportion: head rather large, and covered with small scales, neck thick: colour white, with extremely broad numerous transverse red bars, many of which are bifid on the sides; tail rather taper but not sharp-pointed, and marked above by a deep red undulating stripe of alternately confluent marks in some degree similar to those on the viper, to which tribe this species seems to belong: the head is white above, with two small oblong red marks in the middle: abdomen pale red: described merely from Seba's figure. Notwithstanding the viperine character mentioned in Seba's very slight description, the engraving has something of the appearance of an *Anguis*, and must be considered as doubtful.

AGILE SNAKE.

Coluber Agilis. *C. fasciis alternis albis & fuscis, capite parvo, cauda brevi.*

Snake with alternate white and brown bands, small head, and short tail.

Coluber agilis. *Lin. Syst. Nat. p. 381. Mus. Ad. Frid. p. 27. t. 21. f. 2.*

Abdominal scuta 184, subcaudal scales 50.

DESCRIBED by Linnæus in the Museum Adolphi Friderici. Head small, and covered with large

scales: eyes small: teeth minute: body slender and smooth; length about a span: colour white, with numerous, broad, brown bands, surrounding the body, but narrower below than above: scales on the body smallish, the skin, according to the figure in the work above mentioned, appearing between them, so as to cause a kind of reticular variegation on the brown annuli: tail short, taper, but rather obtuse: native of Ceylon.

FLAT-NOSED SNAKE.

Coluber Simus. *C. nigricans, albo transversim fasciatus, naso simo.*

Blackish Snake, with white transverse bands, and turned-up nose.

Coluber simus. *Lin. Syst. Nat. p. 275.*

Abdominal scuta 124, subcaudal scales 46.

LENGTH about a foot and half: head rather large, roundish, the nose flat in front, and turned up into a slightly pointed tip: between the eyes a black curved band, and on the top of the head a white cross-shaped mark with a black central spot: body blackish or deep-brown, with white variegations so disposed as to form a kind of transverse bands: abdomen dusky: native of North America.

PADERA SNAKE.

Coluber Padera. C. albus, maculis dorsalibus fuscis lineola connexis, lateralibus simplicibus.

White Snake, with blackish dorsal spots connected by a line, and simple lateral spots.

Coluber Padera. Lin. Syst. Nat. p. 382.

Abdominal scuta 198, subcaudal scales 56.

OF this snake little more seems to be known than what may be collected from the short description of its colours given in the *Systema Naturæ*, viz. that it is white, with a dorsal range of double black spots connected by a common line; the sides being marked by a row of simple spots of similar colour. It is a native of India.

 AUSTRALASIAN SNAKE.

Coluber fusco-nigricans, flavo punctatus, scutis brevissimis, abdomine fusco flavoque nebulato.

Blackish-brown Snake, speckled with yellow, with very narrow scuta, and abdomen clouded with brown and yellow.

A LARGE snake, measuring nine or ten feet in length, and being rather slender in proportion: colour above very deep or blackish brown, variegated with numerous yellow specks, which variegation is chiefly owing to each of the black or dark-brown scales being marked on the middle by an ovate yellow spot: on the sides of the body many of the scales are yellow on one half and black on the other; and by degrees appear more

tinged with yellow as they approach the abdomen, which is clouded with a mixture of brown and yellow: the head is small, covered in front, as in most of the innoxious snakes, with moderately large scales: the teeth rather large, and so far as could be judged from the dried specimens hitherto examined, unaccompanied by any poisonous fangs: the abdominal scuta remarkably narrow, scarce extending from side to side more than a fourth of the diameter of the body: the tail short, and gradually tapering to a slender point. The number of abdominal scuta and subcaudal scales, from the imperfect manner in which the dried skins have been imported, is not ascertainable. An extremely good general representation of this species may be found in Mr. White's Journal of a Voyage to New South Wales, as well as of some other Australasian snakes, which have hitherto been only described in a cursory manner, from dried specimens.

CYANEAN SNAKE.

Coluber Cyaneus. *C. cyaneus, subtus virescens.*

Deep-blue Snake, greenish beneath.

Coluber cyaneus. *Lin. Syst. Nat. p. 380.*

Anguiculus Surinamensis cyaneus. *Seb. 2. t. 43. f. 2.*

Abdominal scuta 119, subcaudal scales 110.

A RATHER small species: allied in colour, as well as in shape, to the *Ahaetulla*, being of a deep blue above, and greenish beneath: head of mode-

rate size, longish, and large-scaled: tail long, gradually tapering to a point: native of South America. In Seba's specimen, referred to by Linnæus, a narrow red line divides the sides from the abdomen.

SIBON SNAKE.

Coluber Sibon. *C. ferrugineus albo nebulatus, corpore subcompresso.*

Ferruginous Snake, clouded with white, with subcompressed body.

Coluber Sibon. *Lin. Syst. Nat. p. 383.*

Serpens Africana ab Hottentottis Sibon dicta. *Seb. 1. t. 14. f. 4.*

Abdominal scuta 180, subcaudal scales 85.

SOMEWHAT allied in general appearance to the *Coluber nebulatus*, but rather shorter in proportion: body laterally compressed: head short, flattish, and considerably larger than the neck, pale, and speckled with brown: remainder of the upper parts ferruginous clouded with white: abdomen pale clouded with brown: tail of moderate length, gradually tapering to the tip: the specimen figured in Seba, and referred to by Linnæus, is described as of brighter colours, the ground-colour being yellowish, and the variegations rufous and brown. I cannot forbear expressing some suspicion that this snake and the *nebulatus* may in reality be the same species: at all events, if they are not, they afford a very striking proof of the inefficacy of the Linnæan specific characters attempted from the number of scuta and squamæ.

DINGY SNAKE.

Coluber Exoletus. *C. griseo-cærulescens, capite oblongo depressiusculo, labiis gulaque albis.*

Brueish-grey Snake, with oblong flattish head, and white lips and throat.

Coluber exoletus. *Lin. Syst. Nat. p. 385.*

Abdominal scuta 147, subcaudal scales 132.

DESCRIBED by Linnæus in the Museum Adolphi Friderici: length about three feet: habit of the *Ahætulla*: colour blueish grey: scales on the body obtuse, and arranged in eleven rows: head oblong, flattish: lips and throat white: tail more than a third of the whole length, slender, and pale beneath: native of South America.

DHARA SNAKE.

Coluber Dhara. *C. cupreo-griseus subtus albus, squamarum marginibus albicantibus.*

Cupreous-grey Snake, white beneath, with the edges of the scales whitish.

Coluber Dhara. *Lin. Syst. Nat. Gmel. p. 1111.*

Abdominal scuta 235, subcaudal scales 48.

DESCRIBED by Forskal: native of Arabia: length more than a cubit: thickness less than that of a finger: colour above cupreous grey, with the edges of the scales whitish: beneath white: head ovate and obtuse; covered with large scales, of which that in the middle or between the eyes is larger than the rest.

TYRIAN SNAKE.

Coluber Tyria. *C. albidus, maculis rhombeis fuscis in triplici.*

Whitish Snake, with a triple series of dusky rhomboid spots.

Coluber Tyria. *Lin. Lyst. Nat. Gmel. p. 1111.*

Abdominal scuta 210, subcaudal scales 83.

DESCRIBED by Hasselquist: colour whitish, with a triple longitudinal series of dusky rhomboid spots: native of Egypt.

PELIA SNAKE.

Coluber Pelias. *C. subfuscus fasciis transversis duplicatis nigris, subtus viridis, linea laterali flava.*

Brownish Snake, with double transverse black bands, beneath green, with a yellow lateral line.

Coluber Pelias. *Lin. Syst. Nat. Gmel. 1111.*

Abdominal scuta 187, subcaudal scales 130.

SUFFICIENTLY described in its specific character: observed by Linnæus in the Museum of Degeer: native of South America, and said to occur also in India. In the distribution of its colours it seems allied to the *Coluber ornatus*.

EGG SNAKE.

Coluber Ovivorus. *Lin. Syst. Nat. p. 385.*

Abdominal scuta 203, subcaudal scales 73.

OF this Linnæan snake nothing more seems to be known than that it is a native of America: it

may perhaps be considered as a doubtful species: in the number of its abdominal and subcaudal scales it agrees pretty nearly with the *C. Constrictor*, which is also reported to be a destroyer of eggs.

SWIFT SNAKE.

Coluber Cursor. C. virescens, striis duabus dorsalibus lineato-maculatis albis, lateribus abdomineque albidis.

Greenish Snake, with two dorsal stripes of linear white spots, and whitish sides and abdomen.

La Couresse. *Cepede Ovip. 2. p. 281. pl. 14. f. 2.*

Abdominal scuta 185, subcaudal scales 105.

DESCRIBED by Cepede from a specimen in the Royal Cabinet at Paris: length near three feet: colour greenish above, with two longitudinal rows of small, longish, white spots: sides and abdomen whitish: head covered with large scales: tail of moderate length, and gradually tapering to the tip: said to be a remarkably timid and swift species, generally escaping with great rapidity when discovered: native of the island of Martinico.

HICKANELLA SNAKE.

Coluber Hickanella. *C. albus, cæruleo guttatus, abdomine cæruleo maculato.*

White Snake, speckled with blue above, and variegated with blue on the abdomen.

Serpens *Hikkanella Americanus*. *Seb. 2. t. 75. f. 2.*

A BEAUTIFUL species: length about two feet and a half: thickness moderate: head oblong, large-scaled, white, with the sutures or divisions of the scales blue: remainder of the upper parts white, with numerous small blue spots, disposed in a rhomboid pattern: abdomen white, transversely tessellated in some parts with blue: tail rather short, gradually tapering to the tip: native, according to Seba, of South America, frequenting houses, and being very useful in destroying rats, &c.

BOAFORM SNAKE.

Coluber Boæformis. *C. albidus, fusco variegatus, abdomine albo, scutis brevissimis.*

Whitish Snake, with brown variegations, white beneath, with very short scuta.

Pedda Poda. *Russ. Ind. Serp. p. 27, 28, 30. pl. 22, 23, 24.*

Bora. *Russ. Ind. Serp. p. 44. pl. 39.*

Abdominal scuta 252, subcaudal scales 62.

LENGTH of the specimen described by Dr. Russel about two feet and a half, but supposed to grow much larger: habit thick and short, with

moderately large oblong-ovate head, covered with large scales, and short, sharp-pointed tail: colour of the upper parts very pale or whitish brown, variegated on the back and sides by large and small, irregularly formed, deep-brown patches and spots, those on the sides being mostly ocellated: body covered with very small scales, the three rows next the abdomen being much larger than the rest: abdomen white, the scuta being remarkably narrow or short, and furnished with reddish margins: the under part of the tail is variegated with black and white: native of India: an animal of great strength, wreathing round the arm, if held for a short time, in such a manner as to numb the hand: not poisonous; its bite producing no other effect than that of temporary pain,

VAR. ?

Bora. *Russ. Ind. Serp. pl.* 39.

THIS seems to be no other than the same species of a much larger size; disposition of scales and colours the same, but the ground-colour white, and the tail furnished beneath with several scuta or undivided lamellæ towards the tip, or after those immediately succeeding the vent; while the tip itself is again terminated by a few divided scales: but the number of the whole, taken together, amounts to the same, within a trifle, as in the first-mentioned kind. Found at Calcutta, where it is pretended that its bite is very soon fol-

lowed by eruptions on different parts of the body, though it does not prove fatal in less than ten or twelve days: but this is, in all probability, a mere popular error.

VAR. ?

Pedda Poda. *Russ. t.* 23, 24.

WITH the general habit, colour, &c. of the first-described species, but with larger scales in proportion: perhaps a sexual difference: vent, as in both the preceding, large, semilunar, and edged with a double row of small scales: on each side the vent is also a short, curved, spur-shaped, or horn-like process. This snake is said to grow to a very large size, having been seen of the length of nine or ten feet.

MUCOUS SNAKE.

Coluber Mucosus. C. cærulescens, capite angulato, labiis transversim nigro striatis.

Blueish Snake pale beneath, with angular head, and lips striped transversely with black.

Coluber mucosus. Lin. Syst. Nat. p. 388. *Mus. Ad. Frid. p.* 37. *t.* 23. *f.* 1.

Abdominal scuta 200, subcaudal scales 140.

THIS snake is described by Linnæus in the Museum Adolphi Friderici: it is not remarkable for any thing particular in its appearance, but seems to be rather a small species, measuring about a

foot and half in length, of which the tail measures a third part: the colour is blueish, paler beneath; the head angular, the eyes large, and the lips marked with black bars: it is a native of South America: it seems to be a species rather indistinctly described, and to demand farther examination.

CÆRULESCENT SNAKE.

Coluber Cærulescens. *C. cærulescens capite acuminato, abdomine plano.*

Cærulescent Snake, with pointed head and flat abdomen.

Coluber cærulescens. *Linn. Syst. Nat. p. 389. Mus. Ad. Frid. p. 37. t. 20. f. 2.*

Abdominal scuta 215, subcaudal scales 170.

WITH the general habit of *Ahaetulla*: length a foot and half: colour blueish, paler beneath: abdomen flat: head ovate, and acuminate: tail round and about a fourth of the whole length, gradually tapering to the tip: native of South America. This also seems to be an obscure species.

SMOOTH SNAKE.

Coluber Austriacus. C. griseo-cærulescens lævissimus, serie dorsali duplici macularum rufarum, lateribus abdomineque rufescentibus.

Blueish-grey polished Snake, with a double dorsal row of rufous spots, and rufescent sides and abdomen.

Coronella Austriaca. *Laurenti Amph. p. 84. t. 5. f. 1.*

Là Lisse. *Cepede Serp. p. 158.*

Abdominal scuta 178, subcaudal scales 46.

THIS snake, which in its general appearance and manners bears a considerable resemblance to the *Natrix*, seems to have been first described as a distinct species by Laurenti, who, in his work on the Amphibia, has distinguished it by the title of *Coronella Austriaca*, being common in the region round Vienna. It is also found in France and several other parts of Europe. Its principal mark of distinction from the *Natrix* is the perfect smoothness of its scales; those of the *Natrix* being somewhat carinated: its colour on the upper parts is blueish grey, inclining to rufous on the sides and abdomen: along the back runs a double row of alternate rufous spots: a few others, somewhat less distinct, appear along each side, and the abdomen is variegated with patches of a similar cast: the eyes are red, and through them, from the nostrils to the back of the cheeks, passes a narrow rufous stripe: two moderately large spots also appear at the back of the head, immediately beyond the large scales: in a young state the abdomen is often of a much brighter cast, or red:

while the colour of the upper parts is more obscure. This animal inhabits moist meadows, hedges, watry places, &c. It is of a fierce disposition in its wild state, biting with much eagerness such animals as happen to attack it, but is incapable of producing any injury, being unprovided with poisonous fangs, and is easily tamed, in which state it shows a considerable degree of attachment. It occasionally varies somewhat in colour, the upper parts having a strong tinge of rufous, and the abdomen of dusky brown or even blackish, while the sides have a cast of yellow or green.

CATENATED SNAKE.

Coluber Catenatus. C. albidus, supra maculis quadratis fuscis tessellatis, abdomine fasciis latis subfuscis distantibus.

Whitish Snake, tessellated above with square brown spots, and marked on the abdomen by very distant, broad dusky bands.

Abdominal scuta 147, subcaudal scales 78.

LENGTH about two feet: colour pale or whitish: marked above by numerous square brown spots alternately disposed, and joining at the angles: abdomen pale or white, with six or seven very distant, broad, dusky, transverse bands, one of which is placed immediately beneath the throat: head small, white on the sides, and brown on the top, but marked by a white bar across the nose, joining with two large white marks over the eyes, and thus constituting a kind of reversed horseshoe-shaped white spot on the head: from behind each

eye proceed two dusky lines towards the back of the jaw: tail long, slender, and tapering to a point: described from a specimen in the British Museum.

CINEREOUS SNAKE.

Coluber Cinereus. *C. cinereus, abdomine albido, cauda supra fusco reticulata, subtus transversim lineata.*

Cineréous Snake, with white abdomen, tail reticulated above with brown, and lineated transversly beneath.

Coluber cinereus. *Lin. Syst. Nat. p. 388. Mus. Ad. Frid. p. 37.*

Abdominal scuta 200, subcaudal scales 137.

HABIT of Natrix: length about two feet: colour cinereous: head ovate, convex: eyes large: lips marked by transverse black stripes: trunk covered by nineteen rows of small smooth scales: abdomen white, and slightly angular: tail more than a third of the whole; flattish beneath, with the scales edged with brown above, and appearing reticulated, and transversly lineated beneath: native of the East Indies.

HORSESHOE SNAKE.

Coluber Hippocrepis. *C. lividus fusco maculatus, occipite fascia lunulata reversa.*

Livid Snake, spotted with brown, with a reversed lunulated band on the hind part of the head.

Coluber Hippocrepis. *Lin. Syst. Nat. p. 388.*

Abdominal scuta 232, subcaudal scales 94.

A SMALL species : length little more than a foot : colour livid, with a row of pretty closely placed round brown spots down the back, and two or three rows of much smaller alternating ones down the sides : head of moderate size, marked by a transverse arcuated brown band between the eyes, and by a larger horseshoe-shaped band on the hind-head, the divisions pointing backwards : abdomen pale : tail of middling length, tapering gradually to the tip : native of America.

SCUTATED SNAKE.

Coluber Scutatus. *C. ater scutis latissimis.*

Black Snake, with extremely broad scuta.

Coluber scutatus. *Lin. Syst. Nat. Gmel. p. 1102. Pall. it. 1. p. 459.*

Abdominal scuta 190, subcaudal scales 50.

HABIT of Natrix : length near four feet : colour entirely black, except that the abdomen is marked alternately on each side with a row of smallish, square, yellowish white spots : scuta re-

markably wide, extending on each side in such a manner as to embrace near two thirds of the body: tail somewhat pyramidal, very long, and flattish beneath: this species was observed by Dr. Pallas about the borders of the river Yaik, occasionally frequenting both land and water.

MINERVA'S SNAKE.

Coluber Minervæ. *C. glaucus, fascia dorsali fusca, capite fasciis tribus.*

Glaucous Snake, with a brown band down the back, and three on the head.

Coluber Minervæ. *Lin. Syst. Nat. p. 388. Mus. Ad. Frid. p. 36.*

Abdominal scuta 238, subcaudal scales 90.

DESCRIBED by Linnæus in the Museum Adolphi Friderici: length about a foot and half: thickness greater than that of a swan quill: colour glaucous, with a broad, longitudinal, brown band down the back, and three longitudinal bands on the head, two which pass through the eyes: head oblong, ovate, convex, and smooth: eyes large: tail slender, and measuring about a third of the whole length: on each side the body, towards the tail, is a narrow dusky line: the scales on the whole animal are smooth: native of the East Indies. The Snake, being considered as the emblem of Wisdom, was consecrated to Minerva by the ancient Greeks, but the particular species it would be in vain to conjecture.

CASPIAN SNAKE.

Coluber Caspius. *C. supra alternatim fusco flavoque fasciatus, subtus flavus.*

Yellow Snake, marked above by alternate brown bands.

Coluber Caspius. *Lin. Syst. Nat. Gmel. p. 1112. Lepechin, it p. 317. t. 1.*

Abdominal scuta 198, subcaudal scales 100.

THIS snake is said to be found toward the shores of the Caspian sea, in low grounds, and bushy places: when disturbed, it first endeavours to escape, but if pursued or irritated, springs forwards on its assailant with great fury, though incapable of doing any injury by its bite: its colours are sufficiently described in the specific character: it is said to grow to the length of five feet or more.

DOMESTIC SNAKE.

Coluber Domesticus. *C. griseus, fusco maculatus, macula gemina nigra inter oculos.*

Grey Snake, spotted with brown, with a double black spot between the eyes.

Coluber Domesticus. *Lin. Syst. Nat. p. 389.*

Abdominal scuta 245, subcaudal scales 94.

THIS species is a native of Barbary, where it is said to be in a manner domestic, being very common in the houses of the inhabitants, and considered as a perfectly harmless, and even useful in-

mates, destroying the smaller kind of noxious animals: in its general appearance it is allied to the *Hippocrepis*, being of a pale grey colour, spotted with brown; its principal mark of distinction being a double black spot between the eyes.

HALF-SPOTTED SNAKE.

Coluber Reginae. *C. fusco-violaceus, subtus albus, scutis alternatim macula laterali semiorbiculata fusca notatis.*

Violaceous-brown Snake, white beneath, with the scuta marked alternately by a semiorbicular brown spot.

Coluber Reginae. *Lin. Syst. Nat. p. 378. Mus. Ad. Frid. p. 24. t. 13. f. 3.*

Abdominal scuta 137, subcaudal scales 70.

A SMALL species, about a foot in length: colour purplish brown above, and white beneath, the abdominal scuta marked alternately on one side by a pretty large dusky half-round spot: the tail is of moderate length, rather slender, and the scales beneath are plain or unspotted: native of India.

CARACARA SNAKE.

Coluber Caracara. *C. cæruleus, squamis corporis antici elongatis, postici rhombeis, collo transversim nigro striato.*

Blue Snake, with the scales on the fore part of the body elongated, of the hind part rhomboid, and the neck transversely striated with black.

Coluber Caracara. *Lin. Syst. Nat. Gmel. p. 1117.*

Serpens Caracara Brasiliensis singularis. *Seb. 2. t. 78. f. 3.*

Abdominal scuta 190, subcaudal scales 125.

AN elegant species, described and figured in the work of Seba: length about two feet and a half: habit moderately slender: head rather large and oblong; snout obtuse: from behind each eye a black streak: colour pale blue, the hinder part of the body being tinged with rose-colour: the scales on the fore parts of the animal are of a narrow, lengthened form, and on the hind parts rhomboid, or of the usual shape: neck and fore parts elegantly marked by numerous transverse black lines, the scales on that part being tipped at each end with black: tail rather long, and gradually tapering to the tip: native of Brasil.

VAR. ?

IN this specimen, which is in the British Museum, the head is elegantly marbled with black variegations, and the whole upper parts are varied with black, though not in the same distinctly linear manner as on the fore part: the abdomen is perfectly plain or unspotted, and is marked by two

narrow, pale, distant lines running down the whole length, between which lines it is of a slightly flattened shape. The number of abdominal scuta in this specimen is 185, and of subcaudal scales 90.

QUILL SNAKE.

Coluber Calamarius. *C. lividus, fasciis transversis punctisque linearibus fuscis, subtus albido fuscoque tessellatus.*

Livid Snake, with transverse brown bands and linear points, and tessellated beneath with brown and white.

Coluber Calamarius. *Lin. Syst. Nat. p. 275. Mus. Ad. Frid. p. 23. t. 6. f. 3.*

Abdominal scuta 140, subcaudal scales 22.

A SMALL snake, described by Linnæus in the Museum Adolphi Friderici: length about a span: thickness that of a goose quill: colour above livid, with the whole surface scattered over with linear dusky points, and marked also by several narrow transverse dusky bars: abdomen pale, tessellated in an alternate manner with dusky squares: head very small, convex, and ovate: tail short, and terminating rather obtusely: native of America.

SCHOKAR SNAKE.

Coluber Shockar. *C. fusco-cinereus, vitta utrinque duplici longitudinali alba, abdomine albido, gula fusco punctata.*

Cinereous-brown Snake, with a double longitudinal white band on each side, whitish abdomen, and throat speckled with brown.

Coluber Schockar. *Lin. Syst. Nat. Gmel. p. 1115. Forsk. F. Arab. p. 14.*

Abdominal scuta 180, subcaudal scales 114.

DESCRIBED by Forskal: length about a cubit and half: thickness that of a finger: colour on the upper parts cinereous brown, with a double longitudinal white stripe on each side, and in the more advanced or older specimens, a narrow middle or dorsal stripe, consisting of small whitish spots: throat yellowish, spotted with brown: head ovate, obtuse, and covered with large scales: tail about a third of the whole length: native of the woody parts of Arabia.

 BEATAEN SNAKE.

Coluber Beataen. *Forsk. F. Arab. p. 15.*

A POISONOUS species, mentioned by Forskal, who, however, only tells us that it is black and white, and that its bite is immediately fatal, the body swelling in consequence.

HOELLEICK SNAKE.

Coluber Hoelleik. *Forsk. F. Arab. p. 15.*

ENTIRELY of a red colour: length about a foot: its bite causes an inflamed tumour; and its breath is said to excite an itching on the skin: native of Arabia.

 JARA SNAKE.

Coluber Jara. *C. niger, punctis linearibus geminatis albis, collari abdomineque flavescens.*

Black Snake, with double linear white specks, and yellowish collar and abdomen.

Jara Potoo. *Russ. Ind. Serp. p. 19. pl. 44.*

Abdominal scuta 175, subcaudal scales 56.

LENGTH about fifteen inches: colour black above, each scale marked by two minute white lines: round the back of the head a yellowish collar: abdomen of the same colour: tail very short, tapering suddenly to a point: native of India.

ARNEE SNAKE.

Coluber Arnensis. C. fusco-flavescens, fasciis angustis transversis nigricantibus albo marginatis, abdomine albido.

Yellowish-brown Snake, with narrow, blackish, transverse bands edged with white, and pale abdomen.

Russ. Ind. Serp. p. 43. t. 38.

Abdominal scuta 169, subcaudal scales 50.

LENGTH about a foot and half: colour above yellowish brown, with moderately distant, blackish or very deep brown transverse bands edged with white: abdomen pale: head small: tail rather short, and tapering to a sharp-pointed tip: native of the country of Arnee in the East Indies.

SAGITTATED SNAKE.

Coluber Sagittatus. C. fuscus, maculis dorsalibus sagittatis albidis nigro marginatis.

Brown Snake, with whitish sagittated dorsal spots edged with black.

Tar Tutta. *Russ. Ind. Serp. p. 20. pl. 15.*

Abdominal scuta 229, subcaudal scales 87.

LENGTH about two feet: habit slender: head rather large, round, obtuse, and covered with large scales: neck slender: colour of the upper parts yellowish brown, variegated on the back with a kind of continued chain of sagittated or triangular spots, the sides extending pretty much, and the tips pointing forwards: these spots are edged with black, and become fainter towards the tail, which

is slender, and gradually tapers to a point: abdomen yellowish white, the scuta marked by a dusky spot on each side: native of India.

STREAKED SNAKE.

Coluber Striatus. *C. nigro-virescens, albo fasciato-maculatus, subtus albido-cærulescens.*

Greenish-black Snake, with spotted white bands, and blueish white abdomen.

Gajoo Tutta. *Russ. Ind. Serp. p. 22. pl. 16.*

Abdominal scuta 174, subcaudal scales 40.

LENGTH about fourteen inches: colour above greenish black, marked by about twenty transverse fasciæ, each composed of a number of longitudinal, abrupt, white or yellowish white streaks, and along the sides of the body are interrupted rows of similar streaks: head plain, obtuse, and large-scaled: abdomen blueish white: tail very small, and tapering to a point: native of India.

FASCIOLATED SNAKE.

Coluber Fasciolatus. *C. cinereus, fasciis transversis albidis, abdomine glauco.*

Cinereous Snake, with whitish transverse bands and glaucous abdomen.

Nooni Paragoodoo. *Russ. Ind. Serp. p. 26. pl. 21.*

Abdominal scutá 192, subcaudal scales 62.

LENGTH about two feet: habit rather slender: colour grey-brown, marked with equidistant narrowish, transverse white bands spotted on the edges with black: head ovate, of moderate size, and large-scaled: tail slender, and tapering to a point: abdomen dusky pearl-coloured: native of India, where its bite is popularly believed to be mortal; but Dr. Russel's experiments on chickens prove this notion to be entirely erroneous, the animal being unprovided with fangs.

 BIPED SNAKE.

Coluber Bipes. *Lin. Syst. Nat. Gmel. p. 1099. Scop. Ann. Hist. Nat. 2. p. 39.*

A SOMEWHAT doubtful species, mentioned by Scopoli as an inhabitant of the Tyrolese waters, and said to be furnished with two short processes or feet, and to have red eyes, elliptic dorsal scales, and the lateral ones spotted with white: scutá whitish, with a dusky spot in the middle: perhaps no other than a variety of the *Natrix*.

LINEATED SNAKE.

Coluber Lineatus. *C. cæruleo-virescens, lineis tribus vel quinque fuscis, intermedia latiore.*

Blueish-green Snake, with three or five brown linear stripes, of which the middle one is broadest.

Coluber lineatus. *Lin. Syst. Nat. p. 382. Mus. Ad. Frid. p. 30. t. 12. f. 1. and t. 20. f. 1.*

Serpens Ceilonica lineis subfuscis. *Seb. 2. t. 12. f. 3.*

Abdominal scuta 169, subcaudal scales 84.

THIS is a highly elegant species, but differs considerably in appearance, according to the different periods of its growth: its general colour is a pale and somewhat gilded blueish green above, marked throughout the whole length by five longitudinal narrow bands or stripes, of which the middle one is considerably broader than the others, and of a deep dusky green, with black edges and specks: on each side, at some distance, is a rather narrower stripe of similar colour, and beneath this on each side is a black line. In the small or younger specimens there are rarely more than three stripes; the appearance of the lower or narrow linear side-stripe being scarce apparent: the habit of the animal is long and slender or flagelliform, with a small head, a long, thin tail, and a flattish abdomen: the stripes on the head are continued to the tip of the snout, which is obtuse. It is a native of several parts of India, and is commonly about two or three feet in length. It is a perfectly innoxious species.

DART SNAKE.

Coluber Jaculatrix. *C. albidus lineis tribus nigricantibus, intermedia latiore.*

Whitish Snake, with three blackish stripes; the middle one broadest.

Coluber Jaculatrix. *Lin. Syst. Nat. p. 381.*

Serpens Americana *Xequipiles dicta.* *Seb. 2. t. 1. f. 9.*

Abdominal scuta 163, subcaudal scales 77.

MUCH allied to the *lineatus* in general appearance, but is a smaller species: colour whitish, with a tinge of blue; and marked by three longitudinal black or deep-brown stripes, of which the middle one is by much the broadest: abdomen pale or whitish: it appears to vary in colour, a specimen described by Seba being of a yellowish cast, with the stripes ferruginous: in the number of scuta and squamæ it very nearly resembles the *lineatus*: it is a native of Surinam, and is considered as a harmless animal.

SIBILANT SNAKE.

Coluber Sibilans. *C. carulescens, lineis quinque nigricantibus, capite maculato.*

Blueish Snake, with five dusky lines, and spotted head.

Coluber Sibilans. *Lin. Syst. Nat. p. 383.*

Seb. Mus. 1. t. 109. f. 1. and 2. t. 56. f. 4. t. 107. f. 4.

Abdominal scuta 166, subcaudal scales 100.

MUCH allied in general appearance to the *lineatus*, being of a long slender habit, and marked

with five dark lines or longitudinal stripes on a blueish ground-colour: the chief or middle dorsal stripe is the broadest, and is nearly black, with a whitish speck on each of its component scales: at some distance from this are a pair of rather narrower stripes of similar appearance, and below these another pair of still narrower or more linear ones: the space between the second or lowermost pair is of a paler colour than the rest of the skin, or whitish: the abdomen is also of similar colour: the head is ovate, covered with large scales, and marked with several oblong, blue, and slightly angular spots with black edges: the middle or central spot is of a form somewhat resembling that of a horse-shoe, with the divisions pointing forwards: the interstices between the spots are of a pale or whitish colour: the tail is very long and slender. This species is of considerable size, sometimes measuring four feet in length: it occasionally exhibits a kind of gilded tinge on the skin, and the stripes are sometimes of a chesnut or reddish cast. It is an Asiatic species, and of an innoxious character.

SITULA SNAKE.

Coluber Situla. *C. griseus vitta longitudinali utrinque linea nigra marginata.*

Grey Snake, with a longitudinal dusky band bounded on each side by a black line.

Coluber Situla. *Lin. Syst. Nat. p. 385.*

Abdominal scuta 236, subcaudal scales 45.

OF this species little more is known than what may be collected from its specific character: it is a native of Egypt, and appears to have been first described by Hasselquist.

SAURITE SNAKE.

Coluber Saurita. *C. fuscus, vittis tribus caeruleo-virentibus.*

Brown Snake, with three blue-green stripes.

Coluber Saurita. *Lin. Syst. Nat. p. 385.*

Ribbon Snake. *Catesb. Carol. 2. t. 50.*

Abdominal scuta 156, subcaudal scales 121.

A SPECIES of considerable beauty: colour brown above, with three moderately broad longitudinal blueish-green or whitish stripes: abdomen pale blueish green: the brown colour has sometimes a ferruginous cast, and the blue-green exhibits a degree of iridescent variation: the head is rather small and slightly pointed; the whole habit long and slender, and the tail thin: it is said to be an animal extremely swift in its motions, frequenting trees, and inhabiting Carolina, and many other parts of North America: it is perfectly innocent, and is about three feet in length.

VITTATED SNAKE.

Coluber Vittatus. C. albido-cærulescens, vittis tribus nigricantibus intermedia angustissima, abdomine albo, scutis fusco marginatis.

Blueish-white Snake, with three blackish stripes, the middle one extremely narrow, and white abdomen with the scuta bordered with brown.

Serpens Rotang, &c. Seb. 1. t. 35. f. 4.

Coluber de Terragona. Seb. 2. t. 60. f. 2, 3.

Coluber vittatus. Lin. Syst. Nat. p. 380.

Abdominal scuta 142, subcaudal scales 78.

A MIDDLE-SIZED species, of a moderately slender habit, growing to the length of about two feet and a half: colour pale blue or whitish; marked down the whole length of the back by three black or deep-brown stripes, the middle one being much narrower than the others: between the middle and the side-stripes are also interposed a pair of extremely narrow or linear stripes, which are gradually lost or obliterated after passing some distance down the back: the head is rather small than large, of a longish form, but not sharp-snouted, covered with large scales, and marked above by black variegations, two narrow bands passing over the snout, a much broader one passing horizontally between the eyes, and being dilated behind into a large lobated patch on the top of the head, with two very small, oval, white spots in the middle: the hinder divisions of this patch are continued to some little distance on each side the neck into two or three ovate black spots, from the last of which commence the very narrow or linear

stripes before mentioned: the under parts of the animal are white, each scutum being very deeply margined with black or dark brown, thus forming so many transverse bands on the abdomen and tail, and affording a very characteristic mark of the species: the tail is of moderate length, slender, and gradually tapers to a fine point. This snake is a native of South America, and is considered as an innocuous species: it appears to vary sometimes in colour, Seba describing specimens in which the stripes were red instead of brown or black.

BLACK-BACKED SNAKE.

Coluber Melanotus. *C. albidus vittis tribus approximatis nigris, intermedia latissima.*

Whitish Snake, with three approximated black bands, the middle one very wide.

Serpens Africana Bonæ Spei eleganter lemniscata. *Seb. 2. t. 62. f. 3.*

Abdominal scuta 158, subcaudal scales 50.

A MIDDLE-SIZED, or rather smallish species: length about a foot and half or two feet: habit moderately slender: colour whitish, with three black or dark brown dorsal stripes, of which the middle one is very broad, and the others rather narrow: all pretty closely placed: head of moderate size, covered with large scales, and of a pale colour; neck sometimes marked on each side by a row of five or six roundish black spots, succeeded by the side stripes: abdomen white.

SIRTAL SNAKE.

Coluber Sirtalis. *C. fuscus, vittis tribus viridi-cærulescentibus.*

Brown Snake, with three blueish-green bands.

Coluber Sirtalis. *Lin. Syst. Nat. p. 383.*

Abdominal scuta 150; subcaudal scales 114.

OBSERVED by Kalm in Canada: a slender species, of a brown colour above, with three longitudinal blue green stripes: body said by Linnæus to be slightly striated.

 TRISCAL SNAKE.

Coluber Triscalis. *C. glaucus, lineis tribus fuscis ad nucham conjunctis.*

Glaucous Snake, with three brown lines conjoined at the back of the neck.

Coluber Triscalis. *Lin. Syst. Nat. p. 385.*

Abdominal scuta 195, subcaudal scales 86.

A SMALL but beautiful species, measuring about a foot and half in length, and being of a sea-green colour, marked above by four rufous stripes which gradually unite into three, and afterwards into two, and at length, on the tail, form one single stripe: the head is covered with large scales, those on the other parts being smooth or not carinated: the tail measures about a fifth of the whole length: native of South America.

ELEGANT SNAKE.

Coluber Elegans. *C. griseo-flavescens, fasciis tribus latis reticulatis nigricantibus, fascia abdominali latissima, capite fusco irrorato.*

Yellowish-grey Snake, with three broad reticulated blackish bands, a very broad abdominal band, and head freckled with brown.

Serpens catenata ex Nova Hispania. *Seb. 2. t. 60. f. 1.*

Abdominal scuta 202, subcaudal scales 146.

HABIT long and slender: length about two feet: head long, obtuse, large scaled, and of a grey colour, freckled with innumerable dusky points: on the back a broad, rich chain or stripe formed by four or five reticulated black lines on a blueish or glaucous ground: on each side the body a similar stripe, but narrower, and consisting only of two black lines: the colour of the body between the stripes is yellowish grey; and between the stripes and abdomen yellowish white: the abdomen itself is marked by a very broad reticulated and punctated stripe of a greyish colour with dusky variegations: the tail is very long and narrow. This snake is well figured in Seba, who represents it as a native of South America. In the British Museum are specimens preserved in spirits: in the living animal the colours are probably much more brilliant than in the above description.

TÆNIATED SNAKE.

Coluber Tæniatus. *C. glaucus, fasciis duabus nigris latissimis, lateribus nigro maculatis, scutis utrinque macula semiorbiculata nigra.*

Glaucous Snake, with two very broad black bands, the sides spotted with black, and the scuta marked on each side by a semiorbicular black spot.

Abdominal scuta 148, subcaudal scales 67.

SIZE and proportion of *Berus*: general colour glaucous; abdomen paler: along the back, from head to tail, an extremely broad and conspicuous pair of black fillets, leaving a whitish space in the middle: sides of the body below the fillets blue and spotted, as in the *ringed snake*, with black marks, scuta marked on each side at a small distance from their commencement, by a smallish semi-orbicular black spot: head obtuse, covered with large scales, and marked by a dilated blackish spot and a sharp-pointed white line pointing towards the snout: tail slender, and gradually tapering to a point. Described from a specimen in the British Museum.

DECOROUS SNAKE.

Coluber Decorus. *C. cæruleo-virescens, fascia utrinque duplici nigra, collo utrinque nigro maculato.*

Blueish-green Snake, with a double lateral black band, and the neck spotted on each side with black.

Abdominal scuta 170, subcaudal squamæ 132.

HABIT slender and flagelliform: length about two feet and a half: colour pale, blueish, gilded green, with iridescent variegations: beneath paler or more inclining to white: on each side the body, near the abdomen, a double black stripe: head longish, large scaled, unspotted, and marked on each side, through the eyes, by a broadish black stripe broken into spots, and which, passing to some little distance along the neck, becomes divided, and forms the double lateral stripe before mentioned: eyes large: tail very long, slender, and gradually tapering to a fine point. Described from a specimen in the British Museum.

BILINEATED SNAKE.

Coluber Bilineatus. *C. rufus, fasciis duabus luteis.*

Rufous Snake, with two gold-yellow stripes.

La Double-Raie. *Cepede Serp. p. 220. pl. 10. f. 2.*

Abdominal scuta 205, subcaudal scales 99.

THIS is described by the Count de Cepede, who informs us that it is a beautiful species, measuring about two feet one inch in total length,

the tail measuring six inches and six lines: the colour of the upper parts is rufous, each scale bordered with yellow, and down the back, from the back of the head to the end of the tail, run two bright gold-yellow stripes: the head is furnished with large scales, and those on the body are smooth or uncarinated: its native country is unknown.

BUGLE SNAKE.

Coluber Gemmatus. C. cæruleus, fascia media nigra albo-maculata, lateralibus albis.

Blue Snake, with a black middle-stripe spotted with white, and two lateral white stripes.

Le Chapelet. *Cepede Serp. p. 246. pl. 12. f. 1.*

Abdominal scuta 166, subcaudal scales 103.

A BEAUTIFUL species: length about fifteen or sixteen inches: colour of the upper parts blue, with three narrow equidistant stripes from head to tail, the two lateral stripes being white, the middle one black, marked by a row of small white specks alternately oblong and round, representing a small string of beads and bugles: head large-scaled and marked on each side by three or four spots forming a band across the eyes, the top spotted with pale blue marks bordered with black: the abdomen is white, each scutum being marked at its edge, near the body, with a small black speck, forming two rows down the abdomen: native country unknown: described by Cepede from a specimen in the Royal Cabinet.

EIGHT-LINED SNAKE.

Coluber Octolineatus. *C. subferrugineus, lineis octo nigris.*

Subferruginous Snake, with eight black lines.

Abdominal scuta 185? subcaudal scales 65?

A SMALL Snake, about the size of a middling earthworm: colour pale ferruginous, marked by eight distinct black lines or stripes from head to tail; the two principal ones running down the top of the back, and the rest, which are narrower, down the sides: head scarce larger than the neck, large-scaled, blunt-nosed, and marked over the snout by a transverse black band passing through the eyes: the two principal or dorsal stripes unite in a sharp point on the top of the head: abdomen white: tail short, measuring about an inch and half, and tapering pretty suddenly. Described from specimens in the British Museum, having the appearance of very young animals: native country unknown.

 INTESTINAL SNAKE.

Coluber Intestinalis. *C. subferrugineus, supra lineis tribus albis, dorsali super caput bifurca, abdomine albo nigroque vario.*

Subferruginous Snake, marked above by three white lines, the dorsal one forked on the head, the abdomen variegated with black and white.

Serpentula gracilis longa Guineensis. *Seb. 2. t. 2. f. 7.*

A SMALL, slender species, described and figured by Seba, measuring about a foot and half in

length: colour above pale ferruginous marked by three narrow white lines, of which that on the back is continued to the top of the snout, where it divides into two streaks: abdomen whitish variegated with transverse black bars: head rather large, and, so far as appears from Seba's figure, covered with small scales: native of Guinea.

DIONE SNAKE.

Coluber Dione. *C. cærulescens, fusco maculatus, lineis tribus albidis.*

Pale blue Snake, spotted with brown, with three whitish lines.

Coluber Dione. *Lin. Syst. Nat. Gmel. p. 1106. Pall. it. 2. p. 717.*

Abdominal scuta 190, subcaudal scales 66.

HABIT slender: length about two feet: head small, tetragonal, and commonly reticulated with blackish sutures: colour of the whole upper parts pale blue, with three paler or whitish lines, the intermediate spaces being marked with a row of dusky alternate, and sometimes subconfluent spots or patches: abdomen pale, freckled with minute livid spots interspersed with red specks: tail about a sixth part of the whole length. This species is a native of the salt deserts towards the Caspian sea, and of the hilly regions near the river Irtysh, and was first described by Dr. Pallas.

TRIFASCIATED SNAKE.

Coluber Trifasciatus. C. fasciis tribus latis nigris, intermedia linea alba divisa, abdomine lineis tribus punctatis.

Snake with three broad black stripes, the middle one divided by a white line, and three spotted lines down the abdomen.

A SMALL species, measuring about a foot in length, and being rather thick in proportion: colour above black, formed by three broad stripes, of which the middle one itself is parted down the middle by a very narrow white line: abdomen white, marked by three rows of black spots: head rather small than large, blackish, with white or pale sutures: described from a specimen in the Museum of Dr. William Hunter.

STOLATED SNAKE.

Coluber Stolatus. C. glaucus, fasciis duabus albidis, maculis subquadratis transversis fuscis interjectis.

Glaucous Snake, with two whitish stripes, and squarish transverse brown spots between.

Coluber stolatus. Lin. Syst. Nat. p. 379.

Seb. Mus. 2. t. 14. f. 1, 3.

Abdominal scuta 143, subcaudal scales 76.

OF middling size, measuring from a foot and half to two feet or more in length: habit rather slender: colour above blueish grey, with a pair of moderately distant white lines down the back, and a continued series of brown transverse, equidistant

zones : abdomen pale or white, each scutum being marked on each side by two small black specks : head large-scaled, pale or blueish above, and of moderate size : tail rather short, and tapering to a point. Native of India : mistakenly marked in the *Systema Naturæ* as a poisonous species.

TRILINEATED SNAKE.

Coluber Trilineatus. C. rufus, lineis tribus nigris.

Rufous Snake, with three black lines.

La Trois-Raies. *Cepede Serp. p. 254.*

Abdominal scuta 169, subcaudal scales 34.

LENGTH about a foot and half : colour above rufous, marked throughout the whole length by three black lines or narrow stripes : head covered with large scales : tail about two inches and three quarters long : native of Africa : described by the Count de Cepede.

BOCHIR.

Serpens Ægyptiaca Bochir dicta. Seb. 2. t. 38. f. 3.

SIZE and general habit of the Viper, but the head covered in front with moderately large scales : the head is also very short, and variegated with red spots : colour of the whole animal cinereous yellow, marked along the upper part by five deep rufous stripes or lines from head to tail : ab-

domen speckled with black points: tail shortish, and gradually tapering to a sharp tip: native of Egypt, according to Seba.

AURORA SNAKE.

Coluber Aurora. *C. croceus, fascia dorsali abdomineque flavis.*

Orange-coloured Snake, with yellow dorsal band and abdomen.

Coluber Aurora. *Lin. Syst. Nat. p. 379. Mus. Ad. Frid. p. 25. t. 19.*

Serpens Acontias, &c. *Seb. 2. t. 78. f. 3.*

Abdominal scuta 179, subcaudal scales 37.

LENGTH about two feet and a half, and moderately thick in proportion: colour dull orange, with a broad dorsal line of pale yellow: head rather large, and covered with very large scales: those on the body are also of considerable size: abdomen yellow: tail rather short, and tapering to an obtuse point: native of South America.

IBIRACOA.

Serpens Brasiliensis *Iberacoa dicta. Seb. 1. t. 87. f. 1, 2, 3.*

Serpens *Xaxalhua. Seb. Mus. 2. t. 63. f. 2.*

A BEAUTIFUL snake, figured in the work of Seba: length about two feet: colour pale or whitish yellow, tinged with red, blue, &c. and marked above by several parallel longitudinal rows of black linear spots, the middle or broadest range consisting rather of broadish spots, more espe-

cially towards the head, which is of a lengthened form, white on the top, speckled with black, covered with large scales, and marked along each cheek by a broad black band united at the beginning of the neck by a transverse bar, from the back of which proceed a pair of abrupt streaks down the sides of the neck: tail moderately slender, tapering to a fine point: abdomen white: native of South America. In the kind called *Xavahlhua* by Seba, figured at pl. 63 of vol. 2. the head is yellow with the black cheek stripes, and the body white, with four narrow lines along the upper part, the two middle ones being black, and the two exterior red: perhaps, after all, these snakes may be no other than varieties of some of the Linnæan lineated species, which are known to vary considerably in their colours, and in the disposition of their marks.

 PALE SNAKE.

Coluber Pallidus. *C. griseus, fusco punctatus, lineis utrinque duabus lateralibus interruptis nigris.*

Grey Snake, speckled with brown, with a double, interrupted, black line on each side.

Coluber Pallidus. *Lin. Syst. Nat. p. 381. Mus. Ad. Frid. p. 31. t. 7. f. 2.*

Serpens Americana lemniscata. Seb. 2. t. 11. f. 3. ??

Abdominal scuta 156, subcaudal scales 96.

DESCRIBED in the *Amoenitates Academicæ*.
Habit slender: length a foot and half: thickness that of a swan quill: back slightly angulated on

each side: head roundish, much thicker than the neck, covered with large scales: a double black line beyond the eyes, and which, in passing along the sides of the body, is occasionally interrupted: ground-colour pale, variegated with scattered grey spots and points: tail very slender towards the tip, so that the scales are with difficulty counted on that part: native of India: varies considerably in the number of scuta, &c.

LONG-SNOURED SNAKE.

Coluber Mycterizans. *C. gracilis viridis, naso subtetragono elongato acuminato, linea utrinque abdominali flava.*

Slender green Snake, with subtetragonal lengthened sharp-pointed snout, and a yellow line on each side the abdomen.

Blueish-green Snake. *Catesb. Carol. 2. t. 47.*

Abdominal scuta 192, subcaudal scales 167.

COLOUR grass-green, with a yellow line on each side the abdomen: habit remarkably slender, measuring about three feet and a half in length, and about half an inch in diameter: head moderately large, long, and very sharp-snouted, the upper jaw running far beyond the lower, and being of an obscurely tetragonal form: sometimes this species varies in having an additional pair of yellow abdominal lines, running down the middle of that part: it is an innoxious snake, though erroneously marked as poisonous in the *Systema Naturæ*, owing to the fang-like appearance of its large and long teeth in the upper jaw. It is a native of

many parts of North America, where it is principally seen on trees, moving with great velocity in pursuit of insects, on which it is said principally to feed.

VAR.?

A SUPPOSED variety of this Snake is described and figured in Dr. Russel's work on Indian Serpents, differing from the above in the colour of the under parts, which, instead of being green, are of a cinereous pink-colour, elegantly freckled with very numerous minute black and yellowish dots, the margins of the scuta being edged with dull yellow: the skin of the neck also, when the animal is irritated, exhibits, by the dilatation of the skin on that part, a beautiful variegation of black and white reticular marks, which disappear when at rest: this variety, if such it be, is of an apparently ferocious nature, hissing violently and snapping at any thing opposed to it, but producing no other effect by its bite than that of temporary pain in consequence of mere puncture: it is known by the name of *Botla Passeriki*. See Russel's Indian Serpents, pl. 13. The number of abdominal scuta is 174, and of subcaudal squamæ 148. Another snake, agreeing with the above, except in having the abdomen pale green, is also figured in Dr. Russel's work, under the name of *Passeriki Pam*: its abdominal scuta are 178, and the subcaudal scales 166. The Coluber Mycteri-

zans, in all its states, appears to vary considerably in the number of these parts.

COLUBER NASUTUS.

Serpens viridis ore acuminato ex Java, Aspidis species. *Seb. 2.*
t. 57. f. 4.

COLOUR a beautiful grass-green, with a yellow lateral line at the edges of the abdomen, as in the Mycterizans: general length about three feet: habit moderately slender: head rather large, and covered in front with very large scales, and sharp-pointed, the upper jaw projecting considerably beyond the lower: tail long and slender: well figured in the work of Seba: so nearly allied to the Mycterizans as to be scarce distinguishable by a specific character, but seems to have a somewhat larger head in proportion, and to be somewhat less slender in the body: native, according to Seba, of Java.

PURPURASCENT SNAKE.

Coluber Purpurascens. *C. violaceo-virescens, linea utrinque abdominali pallida.*

Violaceous-green Snake, with a pale line on each side the abdomen.

Serpens canora purpurea Cæcuba. *Seb. 2. t. 82. f. 3.*

Abdominal scuta 212, subcaudal scales 182.

EXTREMELY resembling the *nasutus* and *mycterizans* in general habit, except in the article of the pointed snout, the head in this being of an ovate form, with a moderately tapering, but not pointed upper jaw : its colour is an obscure green, with a very strong cast of violet purple : the skin about the neck and back appearing and forming in some parts a kind of reticular variegation as in the *ahætulla*, *mycterizans*, &c. on each side the abdomen is a white or whitish-yellow stripe, and in some specimens two other stripes of similar colour pass along the middle of that part.

IRIDESCENT SNAKE.

Coluber Ahætulla. C. viridi-cæruleus nitidissimus, abdomine pallido, fascia oculari nigra.

Bright blue-green iridescent Snake, with pale abdomen and black streak across the eyes.

Coluber Ahætulla. Lin. Syst. Nat. p. 387. Mus. Ad. Frid. p. 35. t. 22.

Serpens ornatissima Amboinensis Boiguatrara dicta. Seb. 2. t. 82. f. 1.

Abdominal scuta 163, subcaudal scales 150.

ONE of the most beautiful of the whole serpent tribe, and, in general, easily distinguished by its blue-green gilded tinge, accompanied by iridescent hues: its habit is long and slender, measuring about three feet and a half, or four feet, in length, and about half or three quarters of an inch in diameter: the skin, between the scales, is blackish, and in some parts gives an additional beauty to the general colour: across the cheeks, passing through the eyes, is a jet black streak: the head is covered above with large scales, and the snout is slightly elongated, but by no means pointed: the abdomen is pale and flattish, as in the *mycterisans* and some others of this tribe, and the tail is angular, thin, and of very considerable length. This species is entirely innocent, and is a native of several parts of India.

SUMMER SNAKE.

Coluber Æstivus. C. viridi-cæruleus gracilis rostro obtuso, abdomine virescente.

Blue-green slender Snake, with obtuse snout, and pale-green abdomen.

Green Snake. *Catesb. Carol. 2. pl. 57.*

Abdominal scuta 155, subcaudal scales 144.

HABIT long and flagelliform as in the *Ahætulla*: general length about three feet: head obtuse; colour of the whole upper parts blue-green, with a slight purplish cast in some specimens: abdomen pale blue-green: tail very long and slender: native of many parts of North America, residing on trees, and preying on flies and other insects. *Catesby* affirms that it is easily reclaimed from its natural wildness, becoming tame and familiar, and adds, that some people will carry it in their bosoms.

 FILIFORM SNAKE.

Coluber Filiformis. C. angustissimus niger, subtus albus.

Extremely slender black Snake, white beneath.

Coluber filiformis. Lin. Syst. Nat. p. 388. Mus. Ad. Frid. p. 36, t. 17, f. 2.

Abdominal scuta 165, subcaudal scales 158.

DESCRIBED by *Linnaeus* in the *Museum Adolphi Friderici*: length about a foot; thickness scarcely that of a goose quill: colour black above, appearing like a broad dorsal stripe: beneath

white: head ovate, twice the diameter of the body, black above, and white beneath: tail above a third of the whole length, very slender, and sharp-pointed: native of India. Linnæus observes that it is not quite certain that it may not be a snake in a young or unadvanced state.

BLACK-TAILED SNAKE.

Coluber Melanurus. *C. fusco-flavescens, capite maculisque duabus caudalibus nigris.*

Yellowish-brown Snake, with black head and two black spots on the tail.

Russ. Ind. Serp. p. 12. pl. 8.

Abdominal scuta 241, subcaudal scales 32.

A SMALL species, of a slender habit: length about ten or eleven inches; thickness scarcely that of a goose quill, and nearly of equal diameter from head to the tip of the tail: colour light yellowish brown, with a dotted black line running from head to tail along the middle of the back; and a few fainter fillets on the sides: the head is small, ovate, black, and covered with large scales: the tail is very short, scarce measuring more than an inch in length, and at its origin is marked, on the upper part, by a large rhomboid black spot, edged with white, and having a white speck in the middle: the tip of the tail is also marked by a similar black spot: the abdomen is of a pale orange-colour, but the under part of the tail is white, speckled and variegated with black. This

little snake is a native of India, and is described and figured in Dr. Russel's work on the Indian Serpents: its bite is said to be painful; but, from the experiment of Dr. Russel on the subject he examined, it appeared not to be poisonous to a chicken whose breast it was provoked to bite, and to which it adhered firmly for nearly a minute: the mouth, however, when closely examined, appears to be furnished with fangs.

COLLARED SNAKE.

Coluber Torquatus. *C. supra niger, subtus ruber, collari albo.*

Small Snake, black above, red beneath, with a white collar round the neck.

Little black and red Snake. *Edw. p. 349.*

Another small Snake? *Edw. Glean. 3. p. 291.*

A SMALL species, less than an earthworm: head and upper parts of a polished jet-black colour: abdomen bright red: round the neck a white collar: head rather large, and covered with large scales: eyes flame-coloured: native of Pennsylvania, where it inhabits the crevices of rocks, old walls, &c. feeding on insects, and seldom appearing abroad.

VAR. ?

CHESNUT-COLOURED above, and deep yellow beneath; the two colours being divided by a blue-and-black speckled line: round the neck a collar of yellow spots: native of Pennsylvania.

HYDRUS. WATER-SNAKE.

Generic Character.

<i>Corpus</i> antcrius gracile, sensim crassescens, squamosum.		<i>Body</i> slender in front gradually thickening, scaled.
<i>Cauda</i> anceps:		<i>Tail</i> compressed.

THE genus Hydrus is of late institution, and comprehends those Serpents which naturally inhabit the water, whether fresh or salt, without ever making their appearance on land, except when driven there by accident. In their general appearance they are most allied to the Angues, and are particularly distinguished by having laterally compressed or flattened tails. This genus was first instituted by Mr. Schneider, who has, however, admitted into it two species which seem more properly to belong to the genus Acrochordus, and which the reader will find so stationed in the present work.

Sea, or Water-Serpents, as Mr. Schneider observes, appear to have been known to the ancients; since they are mentioned by the Greek writers; Ælian quoting a passage from an anonymous author relative to snakes of very large size and with

flat tails, produced in the Indian sea. They are also mentioned by Arrian in the *Periplus Maris Erythræi*, &c. &c. Aristotle observes, that serpents are either of land or fresh water, or else of the sea, and that these latter have a resemblance in most particulars to Land-Snakes, but have a head like a Conger. It is probable, however, that some of the *Murænæ* were confounded by the ancients, as they are even by some of the moderns, with the real or proper Sea-Snakes.

COLUBRINE HYDRUS.

Hydrus Colubrinus. *H. plumbeus cingulis nigris*.

Lead-coloured Hydrus, with black surrounding bands.

Hydrus colubrinus. *Schneid. Amph. 1. p. 238.*

Coluber laticaudatus. *Lin. Syst. Nat. p. 383. Mus. Ad. Frid. p. 31. t. 16. f. 1.*

THIS species, which is much more nearly allied to the genus *Coluber* than any of the rest, is a native of the Indian and American seas, and is frequently seen towards the coasts of the southern islands in the Pacific. Its general length is about two feet and a half, but it probably grows to a much larger size: the head is covered with large scales: the body is cylindric, the tail terminating in a flattened and moderately dilated tip: along the whole length of the under parts is a series of scuta and of subcaudal scales, as in the genus *Coluber*, except that they are somewhat less distinctly continued under the compressed part of the tail: the colour of the whole animal is

COLUBRINE HYDRUS.



Zoot. & Nat.

a strong plumbeous or livid blue, with numerous, moderately broad, deep brown or blackish bands from head to tail, each completely surrounding the body, but being rather paler beneath than above: a slight tinge of yellow is also diffused along the abdomen and over the front of the head. This is a poisonous Serpent, but the fangs are remarkably small for the size of the animal.

CASPIAN HYDRUS.

Hydrus Caspius. *H. dorsi maculis nigris orbiculatis, cauda nigricante mucrone gemino, uno supra alterum posito.* Schneid. *Amph. fasc. 1. p. 244.*

Olivaceo-cinereous Hydrus, paler beneath, with black orbicular spots quincuncially disposed in four series down the back, and the tail terminated by a double point.

Coluber Hydrus. *Lin. Syst. Nat. Gmel. p. 1103. Pall. it. 1. p. 459.*

DESCRIBED by Dr. Pallas, and said to be found in the Rhine and the Caspian sea: length about three feet; colour olivaceo-cinereous, with four rows of orbicular black spots disposed in a quincuncial series down the back: abdomen yellowish, tessellated with black: a black band on each side the neck, meeting in a point behind the head, and accompanied by two oblong blackish spots: tail almost entirely black, and terminated by a small double point, one beneath the other: has the general habit of an *Anguis*, having a small head, small eyes with a yellow circle, two rows of small teeth, and a very long, black tongue.

GREAT HYDRUS.

Hydrus Major. *H. lividus, fasciis decurrentibus fuscis, squamis hexagonis abrupte carinatis.*

Livid Hydrus, with brown decurrent bands, and hexagonal abruptly carinated scales.

THIS is a large species, which does not appear to have been yet distinctly described. Its length is more than three feet: its colour pale or livid, marked throughout the whole length of the back by a series of large transverse, semi-decurrent dusky bands: the tail banded more deeply, or so as to shew less of the ground-colour: it is much strictured at the beginning, or place of the vent, and thence very considerably widens towards the tip, which is obtusely pointed: the length of the tail is about four inches, and the scales which cover it are of a somewhat square or lozenge form, and so disposed as to resemble in some degree those of a fish: they are all marked by an abrupt middle carina; the scales on the body are chiefly hexagonal, and are carinated in the same manner: those on the head large and angular: along the lower part of the abdomen runs a pretty strongly marked carina; the scales being not dilated into any appearance of scuta, but merely marked by a middle line of division on the very edge of the carina: the vent is surrounded by a row of large, strong, lengthened scales; and in one specimen are two strictures at the commencement of the tail, viz. at the place of the vent, and at about



GREAT HYDROTUS.

Hill. nat. h.

three quarters of an inch beyond it, the latter being terminated by a long, aculeated scale. This is a marine species, but its particular history seems to be unknown: it appears to be furnished on each side the upper jaw with a row of small teeth, one of which on each side is much larger than the rest, and on being examined with a lens, is evidently tubular, the slit towards the point being much longer in proportion than in that of the Rattle-Snake, and even forming a continued furrow along the greater part of the tooth. Native of the Indian seas.

VAR. ?

A SPECIMEN somewhat less than the former, is of a brown colour, the dorsal bands appearing much less distinct: but as both animals appear to have been long preserved in spirits, too much dependence should not be placed on this particular. These snakes are preserved in the British Museum, as is also another, which, in general form, length, &c. is allied to the preceding, but seems to have differed considerably in pattern and colour, the bands being yellow, decurrent, and becoming alternato-confluent beneath, so as to leave large round side-spots of the white ground-colour.

SLENDER HYDRUS.

Hydrus Gracilis. *H. corpore antcrius gracillimo squamis ovatis lævibus, posterius crassiore squamis hexagonis abrupte truncatis.*

Hydrus with the fore part of the body very slender, and covered with smooth ovate scales; the hind part thicker and covered with abruptly-carinated hexagonal scales.

LENGTH about two feet; head very small, or not of greater diameter than the neck, and covered with large scales: neck and fore part of the body very slender, not more than about a fifth of an inch in diameter, and cylindric for the distance of about seven inches, when it begins to enlarge and flatten into a carina on the upper part, which is continued to the end of the tail. The slender part above mentioned is covered with ovate smooth scales; the remainder of the animal with hexagonal ones, each marked with an abrupt central carina: the tail is about an inch and three quarters long, flat, and obtusely-acuminated, but not so broad as the thickest part of the body: its lower edge is less carinated than the upper, the row of hexagonal scales of the abdomen being continued on this part to the tip. The colour of the whole animal is now grown pale, but appears to have been banded all along the upper parts from head to tail with numerous, equidistant brown and somewhat obtusely-pointed bands reaching almost to the abdomen, those on the small or cylindric part of the body being continued into annuli: the stricture or contraction at the place

of the vent is not so strongly marked as in the great Hydrus, to which this species appears allied in some particulars. It is preserved in the British Museum.

BLUEISH HYDRUS.

Hydrus Cærulescens. *H. cærulescens, fasciis decurrentibus cæruleis, abdomine albo.*

Blueish Hydrus, with dusky-blue decurrent bands, and white abdomen.

LENGTH two feet: habit resembling that of the Great Hydrus, but the abdomen has a single and perfectly undivided row of hexagonal scales, from the throat to the beginning of the tail, of about the tenth of an inch in diameter, and forming a flat carina on that part: back marked by a carina also, but the scales not differing in shape from those on the rest of the body, being hexagonal, with an abrupt middle carina: head not broader than the neck, and covered with large scales: tail two inches and a quarter long, and of the usual form in this genus, being moderately broad, but, as in the preceding animal, not equalling the thickest part of the body. Colour pale livid blue above, and white beneath, but marked throughout its whole length, as in the preceding species, by decurrent fasciæ of a deeper blue, and which dip on the white of the sides: they commence immediately from the head, the top of which is of a simi-

lar colour. It is an East-Indian species, and is preserved in the British Museum.

SHORT HYDRUS.

Hydrus Curtus. *H. flavescens curtus, fasciis decurrentibus subacuminatis fuscis, supra subconfluentibus.*

Yellowish short Hydrus, with dusky decurrent subacuminated bands somewhat confluent above.

LENGTH about a foot: body compressed, and considerably thicker in proportion to its length than in any of the preceding: head flattish, covered with large scales: neck or fore part but little thinner than the rest of the body: tail about an inch long, and of the usual form: scales on all parts hexagonal, and small for the size of the animal: back carinated; abdomen more obtusely so, having a row of hexagonal scales: colour pale yellow, with a pretty close series of deeply decurrent dusky bands from head to tail, and so placed as to appear alternately confluent on the top of the back, more especially near the head. An East-Indian species. Preserved in the British Museum.

FASCIATED HYDRUS.

Hydrus Fasciatus. *H. niger, fasciis ascendentibus flavidis.*

Black Hydrus with ascendent yellowish bands.

Anguis laticauda. *Lin. Mus. Ad. Frid. 2. p. 43.*

Hydrus fasciatus. *Schneid. Amph. 1. p. 240.*

Tatta Pam. *Russel's Ind. Serp. pl. 44.*

THE Fasciated Hydrus is described and figured by Mr. Vosmaer, in his work on some of the rarer species of animals, as well as by Dr. Russel, in his publication on the Indian Serpents. It appears, from the account of Mr. Schneider, to arrive at a considerable size, though the specimen figured by Dr. Russel scarcely measures two feet in length: it is of a long and slender habit, and is of a black colour, fasciated throughout its whole length by pretty closely placed yellowish white pointed bands, rising upwards from the abdomen, and almost meeting at their tips on the ridge of the back: the head is small, or not broader than the neck, and is covered by large scales: the neck cylindric: the back carinated, the sides declining, and the belly roundish: the scales on the trunk, tail, and belly, orbicular, close, and not imbricated: the tail, which does not much exceed the diameter of the body, terminates obtusely, yet tipped with a point: the teeth are small; a marginal and two palatal rows appearing in the upper jaw; and, therefore, according to the general rule, it may be supposed not poisonous: Mr. Schneider, however, in the larger specimens which he exa-

mined, observed a large curved fang-like tooth on each side, hid, as it were, in a sheath. This serpent is a native of the Indian seas: the specimen described by Dr. Russel was found on the sea beach at Vizagapatam, in August 1788, and appeared very alert in its motions; yet, when put into a vessel of sea water, in order to be kept for experiments relative to its bite, it very soon died.

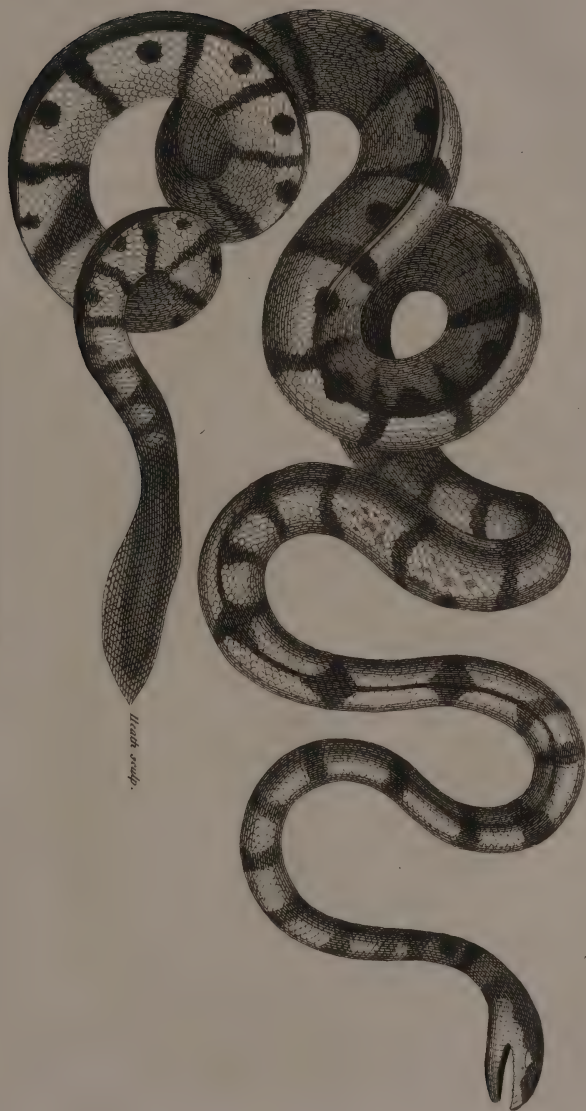
SPIRAL HYDRUS.

Hydrus Spiralis. *H. flavescens fusco fasciatus, fasciis subtus in longitudinem confluentibus, corpore spiraliter contorto.*

Yellowish Hydrus with brown bands, longitudinally confluent beneath, and spirally contorted body.

THE present highly elegant species appears to have been hitherto unnoticed: its length is about two feet, and its habit slender: the body much compressed throughout; the back rising into a very sharp carina; the abdomen being also carinated, but having a flattened edge of scales somewhat wider than the rest, and measuring about the fifteenth of an inch in diameter: the head is small, and covered with large scales: the mouth wide; the scales on the whole animal moderately small, ovate, and slightly carinated: the ground colour is yellow, barred in a beautiful manner from head to tail with deep chesnut-brown or blackish fasciæ, each widening on the abdomen, and thus forming a highly distinct and handsome pattern when viewed on each side,

SPIRAT. HYDRUS,



seeming to constitute so many large, round, yellow spots on a blackish ground: the back, at about the middle, is marked, along its upper part, with a row of rather large, round, blackish spots situated between the fasciæ, and so placed as to be in some parts on one side, and in others on the opposite side of the dorsal carina, while some few are seated on the middle of the ridge itself: this variegation is continued to the tail, which is about an inch and three quarters long, black or deep brown, with a few yellow patches towards its beginning: it is remarkably broad for the size of the animal, and very thin on the edges, so as to be semitransparent on those parts. The most remarkable circumstance in this snake is the singular obliquity of its form; the body in different parts being alternately flatter on one side than the other, and the pattern completely expressed on the flattened side only; the other or more convex side being unmarked by the round spots, and lying as it were beneath; thus constituting several alternately spiral curves: this snake seems of an unusually stiff and elastic nature, and the carina on the back is so sharp as to surpass in this respect every other species of serpent. The specimen is in the British Museum, but its particular history seems to be unknown.

BLACK-BACKED HYDRUS.

Hydrus Bicolor. *H. capite oblongo, corpore supra nigro, infra flavido, cauda maculosa.*

Hydrus with oblong head, body black above and yellowish beneath, with spotted tail.

Hydrus bicolor. *Schneid. Amph. 1. p. 240.*

Anguis Platura. *Lin. Syst. Nat. p. 391.*

Nixboa Quanquecolla, seu serpens rara Mexicana cauda lata, *Seb. 2. p. 80. t. 77. f. 1.*

Nalla Wahlagillee Pam. *Russ. Ind. Serp. p. 47. pl. 41.*

THIS species is readily distinguished by the remarkable distribution of its colours; the head and upper parts being of a deep black, the lower parts pale yellow, and the tail spotted: along the sides runs a row of smaller scales than the rest, and of a brighter yellow: the head is black, and is of an elongated form in front, bulging behind, subconvex above, and a little compressed laterally: it is covered with large scales: the mouth is wide; the teeth small and numerous, there being a marginal and two palatal rows in the upper jaw: the body is compressed, and the back highly carinated: the scales orbicular and very minute: the general length about two feet and a half; the tail about three inches. It is a native of the Indian seas, and is said to be common near the coasts of the island of Otaheitee, where it is called by the name of *Etoona-toree*, and is used as an article of food.



BLACK-BACKED HYACINTH.

Black swamp.

DARK-BLUE HYDRUS.

Hydrus Atrocæruleus. *H. atrocæruleus, abdomine flavescente, linea media cærulea.*

Dark-blue Hydrus, with yellowish abdomen marked by a middle line of blue.

Mutta Pam. *Russ. Ind. Serp. p. 35. pl. 30.*

Hydrus Enydris. *Schneid. Amph. Fasch. 1. p. 245.*

LENGTH one foot eight inches: colour a very dark changeable blue; abdomen yellowish white, with a dark blueish line along the middle: head small, and covered with large scales: fore part of the body slender; circumference of the trunk, in the thickest part, about two inches and a quarter: tail short, small, taper, and compressed. This snake, which is described by Dr. Russel, was taken in an Indian lake called *Ankapilly*, in one of the traps employed for catching eels: it appeared to be harmless; having in the upper jaw a marginal and two palatal rows of small reflex teeth.

 CINEREOUS HYDRUS.

Hydrus Cinereus. *H. cinereus, rostro subtruncato, abdomine sub-flavescente.*

Ash-coloured Hydrus, with subtruncated snout, and abdomen tinged with yellow.

Hydrus Rynchops. *Schneid. Amph. 1. p. 246.*

Karoo Bokadam. *Russ. Ind. Serp. p. 23. pl. 17.*

LENGTH near three feet and a half: thickness near the head about three inches: middle of the

trunk four inches and a half: head somewhat broader than the neck, yet appearing small in proportion to the trunk: rather convex above, compressed on the sides, and projecting into a short obtuse or subtruncated snout, which is covered with smallish laminæ of various sizes: the remainder of the head, as well as of the whole upper parts, with ovate or suborbicular carinated scales, smallest on the head: eyes small and vertical: mouth not large: teeth close set, not regular, small, and reflex; a marginal and two palatal rows in the upper jaw. Colour of the scaly part of the snout pale cinereous; the rest of the animal very deep grey or ash-colour: abdomen tinged with yellow: tail a little compressed, eight inches in length, moderately tapering, and terminating in an obtuse point. Sent to Dr. Russel from *Ganjam* in July 1788: the particulars of its history unknown: placed in this genus by Schneider from its habit and alliance with the preceding.

FISHING HYDRUS.

Hydrus Piscator. *H. fusco-flavescens, maculis rotundatis nigris lineisque connectentibus.*

Brownish-yellow Hydrus, with rounded black spots joined by connecting lines.

Hydrus Piscator. *Schneid. Amph. p. 247.*

Neeli Koea. *Russ. Ind. Serp. p. 38. pl. 33.*

LENGTH about two feet nine inches: circumference three inches and a half: head rather

broad, ovate, somewhat depressed, and laterally compressed; covered with large scales: tail eleven inches in length, slightly carinated, tapering very gradually, and terminating sharply: head dusky; rest of the animal yellowish brown, with numerous round black spots joined by narrow fillets regularly disposed in oblique rows, a few scales of light yellow being interspersed: abdomen yellowish white. Native of India, frequenting wet paddy fields, and commonly reckoned a water-snake: moves swiftly, and carries its head high, with a menacing air, in its progression, but when provoked did not either hiss or snap at a stick presented to it: was not provoked to bite a chicken, though pecked several times by the animal: during the time of this experiment it threw up a pretty large fish, which appeared to have been but a short time in the stomach: is not a poisonous species, the teeth resembling those of other innocuous serpents: does not very properly belong to this genus.

MARSH HYDRUS.

Hydrus Palustris. *H. fusco-flavescens, maculis rhombeis fuscis lineisque interjectis, abdomine perlaceo.*

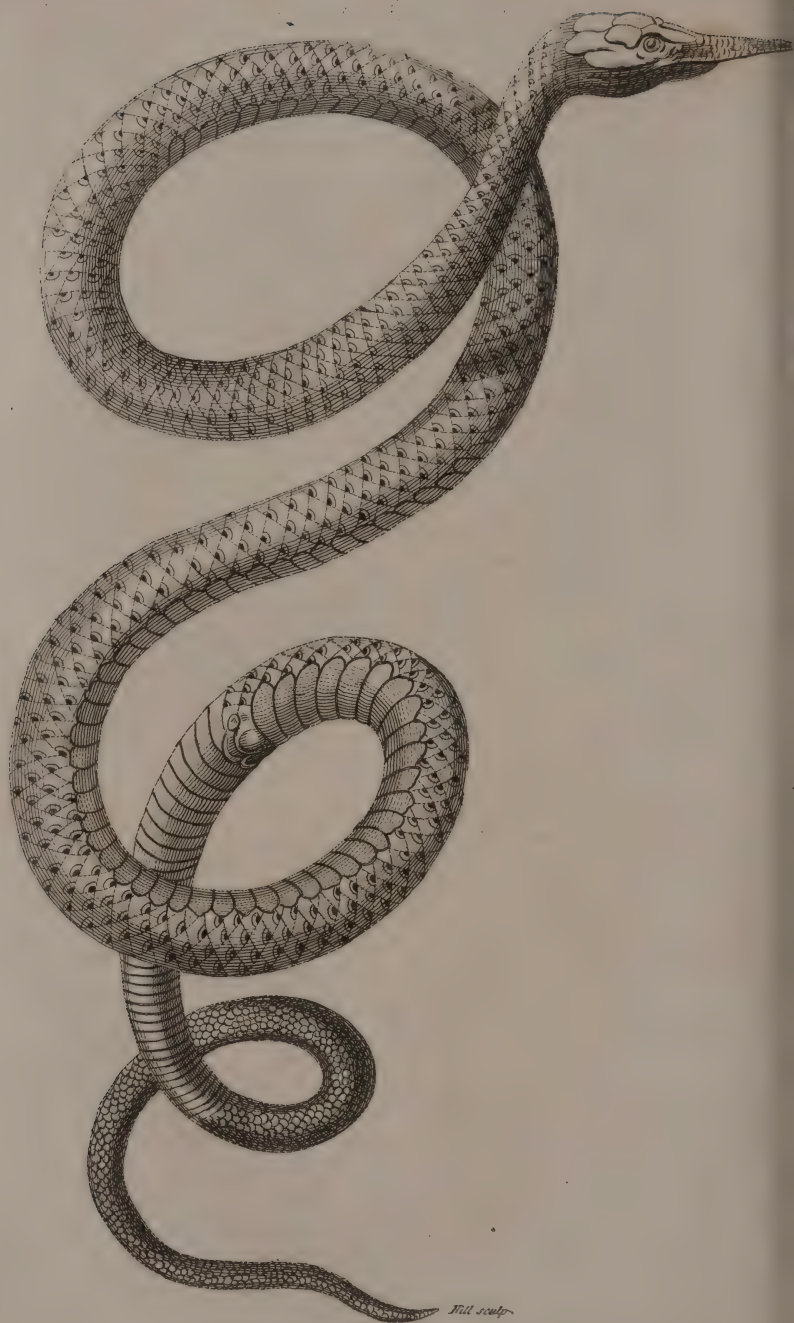
Brownish-yellow Hydrus, with rhomboid brown spots and interjected lines, and pearl coloured abdomen.

Hydrus palustris. *Schneid. Amph. p. 249.*

Paragoodoo. *Russ. Ind. Serp. p. 25. pl. 20.*

ALLIED to the preceding species: length more than two feet: trunk round; swelling and dimi-

nishing in a gradual manner: head broadish, oblong, covered with large scales: tail round, about five inches and a half long, and very taper: colour of the animal on the upper parts yellowish brown, beset with oblique rows of rhomboid brown spots with black borders, and between each range of spots runs a ferruginous line: the whole forming a decussated pattern of spots and lines: scales oblong and carinated: tail plain or unspotted: abdomen pearl-coloured. This species, according to Dr. Russel, is not uncommon in India, frequenting damp grounds, and the borders of tanks, and growing to a size much larger than that of the specimen above described: it is not a poisonous species: in reality it is not very properly stationed in the present genus, having neither flattened tail, nor carinated abdomen.



SNOUTED LANGAYA.

LANGAYA. LANGAYA.

Generic Character.

Scuta abdominalia.

Annuli caudales.

Squamæ terminales.

|| *Abdominal Plates.*

|| *Caudal Rings.*

|| *Terminal Scales.*

SNOUTED LANGAYA.

Langaya Nasuta. L. maxilla superiore rostrata.

Langaya with the upper jaw produced in form of a snout.

Langaha. Bruguere. Journ. de Physique, 1784. Cepede Ovip.
2. p. 469.

Abdominal scales 184, caudal rings 42.

THE genus *Langaya*, consisting of a single species only, differs from all the rest of the serpent tribe in having the upper part or beginning of the tail marked into complete rings or circular divisions resembling those on the body of the *Amphisbæna*, while the extreme or terminal part is covered with small scales, as in the genus *Anguis*.

The *Langaya nasuta*, or Long-snouted *Langaya*, is a native of Madagascar, and appears to have been first described by Mons. Bruguere of the Royal Society of Montpellier, whose account of it is inserted in the *Journal de Physique* for the

year 1784. The length of the individual described was about two feet eight inches, and its greatest diameter about seven lines: the head is covered with large scales, but the snout, which is extremely long and sharp, projecting to a considerable distance beyond the lower jaw, is covered with very small scales: the teeth, in shape and disposition, resemble those of a Viper: the scales on the upper parts of the body are rhomboidal, of a reddish colour, and each marked at the base by a small grey circle, with a yellow spot in the middle: the under parts are pale or whitish: the number of abdominal scuta, as well as of circles on the tail, is observed to vary in this snake, as is also the colour, which in one individual was violet, with darker coloured specks on the back. The natives of Madagascar are said to hold the Langaya in great dread, considering it as a highly poisonous serpent.

JAVAN ACROCHORDUS.

*Stratford sculp.*

ACROCHORDUS. ACROCHORDUS.

Generic Character.

Corpus caudaque undique verrucosa. || *Body and tail completely covered with warts.*

JAVAN ACROCHORDUS.

Acrochordus Javanicus. A. nigricans, subtus albidus, lateribus fusco maculatis.

Blackish *Acrochordus*, whitish beneath, with the sides marked by dusky spots.

Acrochordus Javanicus. Hornst. Act. Stocholm. 1787.

THE remarkable snake which gave rise to the institution of this new genus, is a native of the island of Java, and was first described by Mr. Hornsted in the Swedish Transactions for the year 1787, and in the Journal de Physique for the year 1788. It was found in a large pepper-ground near Sangasan, in the year 1784, and measured about eight feet in length; the thickness of the neck being six inches, that of the largest part of the body ten inches, and that of the tail an inch and half: the colour of the upper part of the animal was blackish, and of the under part whitish; the sides marked with dusky spots: the head trun-

cated, depressed, and scaly: the jaws equal, the superior being emarginated beneath; the inferior curved: the eyes lateral, on the fore part of the head; the irides livid: the nostrils circular, small, approximated, and situated above the tip of the snout: the rictus or gape rather small for the size of the body: the teeth in both jaws subulate, very sharp, and reversed, without any appearance of fangs, and accompanied by a double row of very small teeth in the palate: the tongue thick at the base, the forked part black and slender: the body entirely covered, as well as the tail, with rough tricarinated warts: the vent small, the body very suddenly tapering towards the tail. This snake was secured by a Chinese, by means of a split bamboo applied over its neck, and thus carried to Batavia, where, on being skinned and opened, exclusive of a quantity of indigested fruit, were found five completely formed young, measuring nine inches each: the flesh of the animal was eaten by the Chinese people, who affirmed that it was excellent food, and the skin, being preserved in spirits, was brought over to Europe by Mr. Hornsted, and deposited in the Museum of the King of Sweden.



DOUBTFUL ACROCHORDUS.

Acrochordus Dubius. *A. fuscus, abdomine carinato, lateribus nigro-maculatis.*

Brown Acrochordus, with carinated abdomen, and sides spotted with black.

IN its general appearance and proportion so very nearly does the present serpent resemble the preceding or Javan species, that one description might almost serve for both, except that the head in this is covered with very minute rough or warted scales, differing in size alone from those on other parts of the animal, whereas, if we may rely on the accuracy of Mr. Hornsted's description and figure of the Javan Acrochordus, that part is covered with flat, ovate scales, and of a far different appearance from the muricated or wart-like scales on every other part. The size of the present specimen also falls much short of the former, measuring only about three feet in length: its colour is an obscure brown, with some ill-defined clouds and patches of a darker colour dispersed along the sides and abdomen: the shape of the vent, thickness of body, and sudden contraction at the beginning of the tail, as well as the comparative size and shape of that part are exactly similar: the abdomen, however, in this serpent is slightly carinated beneath towards the tail, which is a circumstance not particularized in Mr.

Hornsted's description of the Javan species. The present specimen is in the British Museum, and the highly accurate engraving which accompanies this article will shew in the most satisfactory manner the resemblances and discrepances between this and the former animal. Its native place is not particularized.

FASCIATED ACROCHORDUS.

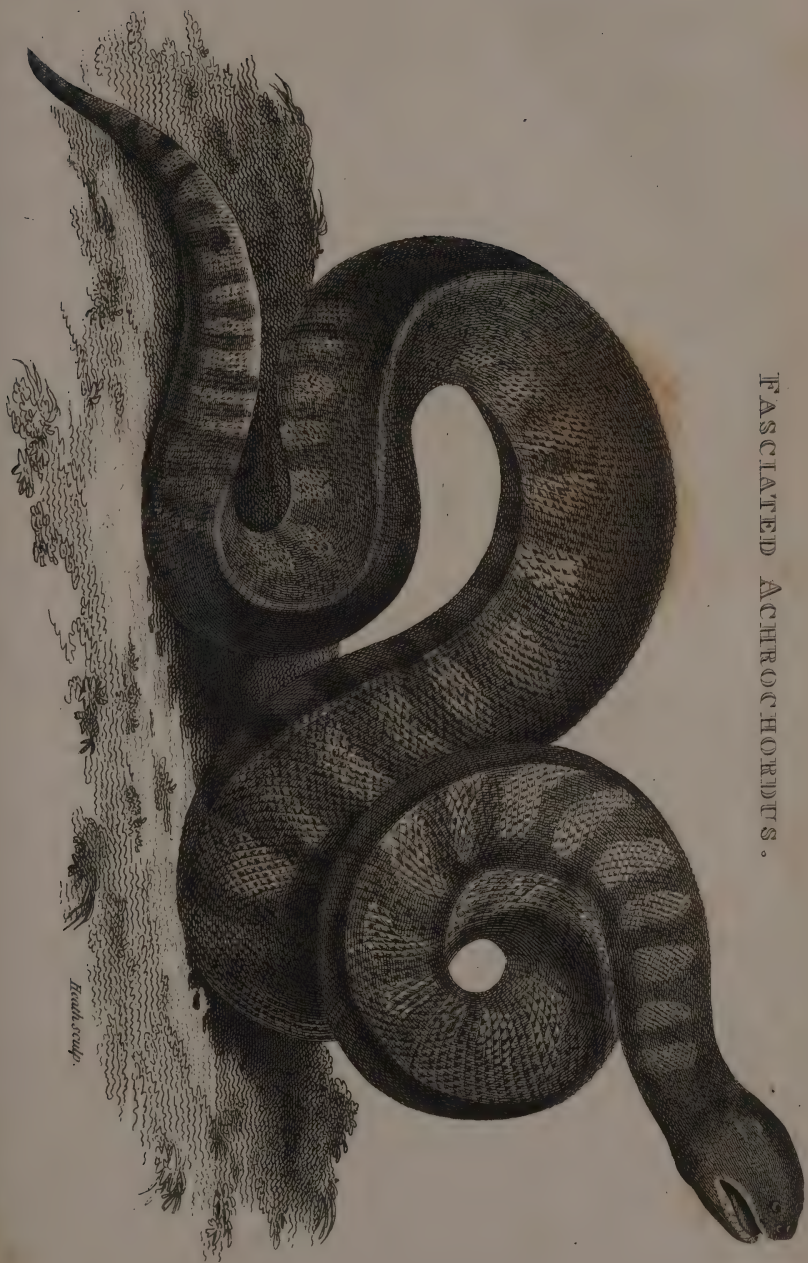
Acrochordus Fasciatus. A. fuliginosus, abdomine carinato, fasciis lateralibus ascendentibus albidis.

Fuliginous Acrochordus, with carinated abdomen, and whitish ascendent lateral bands.

Hydrus granulatus. H. corpore scabro fuliginoso, fasciis albis in ventre latioribus cincto. Schneid. Amph. Fasc. 1. p. 243.

THIS is so much allied to the preceding, that it may perhaps be doubted whether it really differs in any other respect than age, size, and cast of colours, measuring about eighteen inches in length, and being of a dusky-brown colour, with several paler fasciæ which take their rise from the abdomen, and ascend on the sides: the abdomen is carinated, as in the former. This is certainly the *Hydrus granulatus* of Mr. Schneider, who, in his work on the Amphibia, describes it as a water-snake, though, seemingly, without any other foundation than its having a carinated abdomen; its other characters by no means agreeing with

FASCIATED ACHROCHORDUS.



those of the genuine Hydri. Mr. Schneider observes its near affinity with the Hornstedian Acrochordus, but mentions nothing particular relative to its native place. The specimen is in the British Museum, and is very accurately represented on the annexed plate.

ANGUIS. SLOW-WORM.

Generic Character.

Squamæ abdominales et sub- || *Scales* both on the abdomen
caudales. || and beneath the tail.

THIS genus is easily distinguished by having the abdomen and under part of the tail covered with scales of similar appearance to those on the rest of the animal, except that in some few species they are rather larger: to this may be added, that the body is of a shorter and more uniformly cylindric form than in the genus *Coluber*, and that the eyes are, in general, small, and the tail rather obtuse: no poisonous species of *Anguis* has yet been discovered. To the English generic title, *Slow-Worm*, some objection may perhaps be made, and it is not to be imagined that all the animals of this genus are remarkably slow in their motions; though, from the want of scuta, they perhaps may be allowed to move with less rapidity than the generality of Snakes.

COMMON SLOW-WORM.

Anguis Fragilis. *A. grisco-rufescens, dorso fusco-striato, abdomine plumbeo.*

Rufous-grey Slow-Worm, with the back striated with brown, and lead-coloured abdomen.

Anguis fragilis. *Lin. Syst. Nat. p. 923. Laur. t. 5. f. 2.*

Cæcilia. *Aldr. Gesn. Raj. Jonst. &c.*

Blind-Worm. *Penn. Brit. Zool. 4. p. 23. pl. 4.*

Long-Cripple. *Borl. Cornw. p. 284. pl. 28. mala.*

Abdominal scales 135, subcaudal 135.

THIS species is found in almost all parts of Europe in similar situations with the common Snake, and is a perfectly innoxious animal, living on worms and insects: its usual length is from ten to twelve inches, and sometimes even more: its colour is pale rufous brown above, with three narrow longitudinal dorsal streaks or lines of a darker cast; and beneath a deep lead-colour: the head is rather small, and covered in front with large scales, as in most other innoxious serpents: the eyes are very small: the tail measures more than half the length of the animal, and terminates pretty suddenly in a slightly acuminate tip. The Slow-Worm is a viviparous animal, and sometimes produces a very numerous offspring: like other serpents, it varies in intensity of colours at different periods, and the young are commonly of a deeper cast than their parent: the general motions of this animal are rather slow than otherwise, except when endeavouring to escape; and the young seem to move more slowly than

the full grown ones: Slow-Worms can, however, occasionally exert a considerable degree of swiftness, and can readily penetrate the loose soil, in order to conceal themselves from pursuit: they are often found in considerable numbers, during the winter season, at some depth beneath the surface; retiring on the approach of winter, and lying in a state of torpidity, and again emerging from their concealments on the approach of spring, when they cast their skin, and recover their former liveliness. It is observed of this species, as well as of some others, that if struck with any degree of violence, the body not only breaks abruptly on the struck part, but even sometimes at different places: the skin is remarkably strong, and the animal, when handled or irritated, has a way of stiffening itself by stretching to its utmost length, in which state, if any part of the skin be injured, the separation soon takes place in consequence of this rigidity, instead of yielding like the more limber bodies of the snakes.

Var. ?

ABERDEEN SLOW-WORM.

Anguis Eryx? *Lin. Syst. Nat. p. 923. Penn. Brit. Zool. 3. p. 33.*

Abdominal scales 126, subcaudal 136.

THIS seems to be no other than a variety of the *A. fragilis*, differing merely in being something larger, and of rather darker colours: found in

some parts of Scotland, and, according to Linnæus, in America also.

SPECKLED SLOW-WORM.

Anguis Meleagris. A. griseo-rufescens, undique fusco-punctata,
 Rufous-grey Slow-Worm, speckled on all sides with brown.
Anguis Meleagris. Lin. Syst. Nat. p. 390.
Serpens Cæcilia seu Scytale. Seb. 2. t. 21. f. 4.
 Abdominal scales 165, subcaudal 32.

THIS, according to Seba's figure quoted by Linnæus, appears so nearly allied to the common Slow-Worm that it might almost be considered as the same animal, differing in the want of the dorsal streaks, and in having the whole upper surface freckled with minute deep-brown specks, the tip of each scale being of that colour: it is a native of the East Indies.

PAINTED SLOW-WORM.

Anguis Scytale. A. fulva, fasciis alternis nigris.
 Fulvous Slow-Worm, with alternate black bands.
Anguis Scytale. Lin. Syst. Nat. p. 923. Mus. Ad. Frid. p.
21. t. 6. f. 2.
Merian Surin. t. 69.
 Abdominal scales 240, subcaudal 13.

THE Painted Slow-Worm is a species of singular beauty: its general length is about a foot and half or two feet, and its diameter moderate in

proportion: the ground-colour is a rich yellow-ferruginous or orange, on which are disposed, throughout the whole length of the animal, numerous, moderately broad, equidistant, jet-black transverse bands, not continued entirely round the body, but alternating with each other, and terminating in rounded extremities: the scales on the intermediate parts are generally tipped with brown, exhibiting more or less of a speckled appearance on the skin: when this animal, however, has been preserved for any considerable length of time in spirits, the orange-colour fades into white, in consequence of which, the specimens usually seen in Museums appear variegated only with black and white: the head is small, and the tail very short, viz. not above one twentieth of the whole length, and terminating obtusely: this species is a native of South America and some of the West-Indian islands.

CORAL SLOW-WORM.

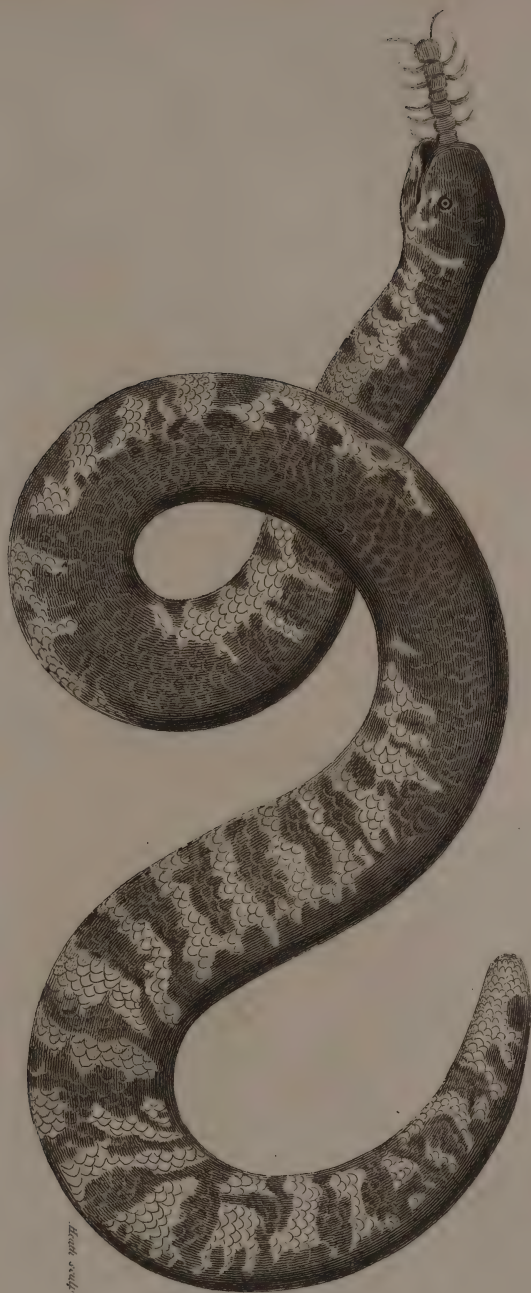
Anguis Corallina. *A. rubescens, sanguineo-variatus.*

Pale-red Slow-Worm, with blood-red variegations.

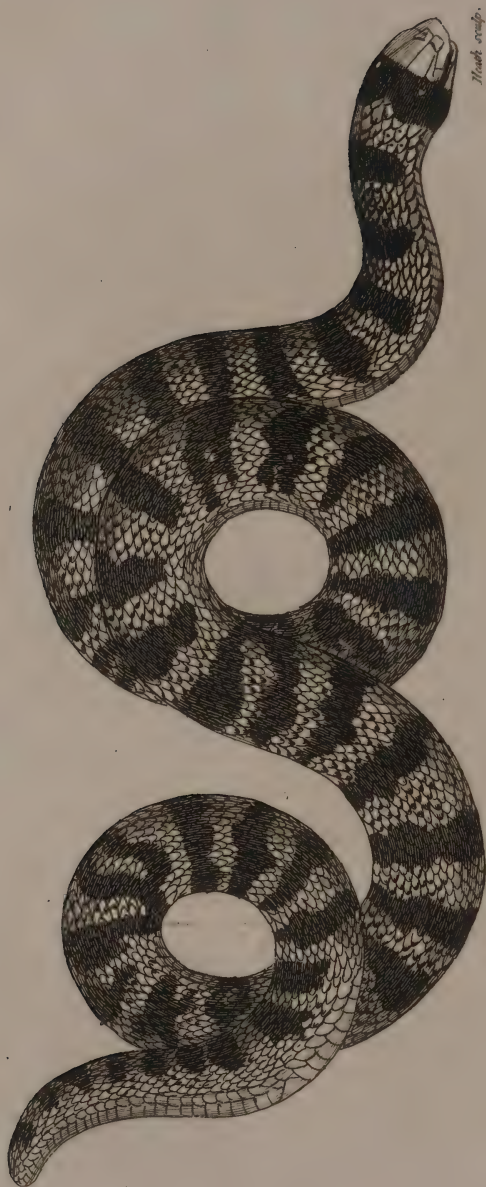
Anguis corallinus. *Lin. Syst. Nat. Gmel. p. 1123.*

Serpens coralloides Brasiliensis rubra. *Seb. 2. t. 73. f. 2.*

A LARGE and highly elegant species: length about a foot and half: thickness very considerable: ground-colour pale red, with very broad alternating fasciæ and variegations of deep coral red: the scales are moderately large, and of a



CORAL SLOW-WORM.



BLACK-BANDED SLOW-WORM.

rounded form, and the head and tail are remarkably obtuse. This beautiful animal is a native of South America, where it is said to be found in woods, and to prey on the larger insects, as scolopendræ, &c. &c. : in colour it sometimes varies, a mixture of black being blended with the red on the sides, and the bands more numerous in some specimens than in others.

BLACK-BANDED SLOW-WORM.

Anguis Ater. *A. albus nigro fasciatus.*

White Slow-Worm, with black bands.

Anguis Ater. *Linn. Syst. Nat. Gmel. p. 1123.*

Amphisbæna Ceylonica foemina. *Seb. 2. t. 73. f. 3.*

MUCH allied in general appearance to the preceding, but differing in colour, being white with black bands: the abdominal scales, according to Seba's figure, on the authority of which this species is given, are somewhat dilated, so as to approach in some degree to those in the genus *Coluber*: native of South America.

GLASS SLOW-WORM.

Anguis Ventralis. A. nigro-virescens, flavo punctatus, abdomine brevissimo flavo, sulco laterali.

Blackish-green Slow-Worm, speckled with yellow, with very short yellow abdomen, with a lateral furrow.

Anguis ventralis. Lin. Syst. Nat. p. 923.

Glass Snake. *Catesb. Carol. 2. pl. 59.*

Abdominal scales 127, subcaudal 222.

THIS is a moderately large and handsome species: general length about a foot and half or two feet: colour greenish brown, elegantly mottled with small pale yellow and black freckles: the under parts pale yellow: the head small: from the corners of the mouth to the vent, along each side of the body, runs a deep furrow, separating the abdomen, which is remarkably short, from the upper parts: the tail is more than twice the length of the abdomen, and terminates somewhat more acutely than is usual in this genus: the body is marked above by several rows of slightly elevated striæ, which give the animal a general resemblance, except in colour, to the remarkable lizard termed *Lacerta apoda*. This species is a native of North America, and is not uncommon in Carolina, where it is known by the name of the Glass Snake. Catesby informs us that “a small blow of a stick causes the body to separate, not only at the place struck, but at two or three other places, the muscles being articulated quite through the vertebræ.”

SPOTTED SLOW-WORM.

Anguis Maculata. A. flava, tenia dorsali alternato-fasciata nigra.

Yellow Slow-Worm, with an alternately-fasciated black dorsal band.

Anguis maculata. Lin. Syst. Nat. p. 391. Mus. Ad. Frid. p. 21. t. 21. f. 3.

Tucuman, &c. dicta Serpens ex Paraguaja. Seb. 2. t. 100. f. 2.

Serpens Amphisbæna orientalis. Seb. 1. t. 53. f. 7.

Abdominal scales 200, subcaudal 12.

LENGTH about a foot and half or two feet: thickness moderate: colour yellow or orange, with a black dorsal line, on each side of which are numerous, narrow, alternating, transverse bands of the same colour, continued throughout the whole length: the abdomen is traversed by less numerous but broader bands of a dusky colour: native of South America.

VAR. ?

WITH red instead of black variegations.

BLACK-SPOTTED SLOW-WORM?

Anguis? *leucomelas*. *A. albus*, *serie triplici vel quadruplici macularum dorsalium nigrarum*.

White, Slow-Worm? with a triple or quadruple dorsal series of black spots.

Vipera Brasiliensis Tetzauhcoatl dicta. *Seb.* 2. t. 78. f. 2, 3.

A BEAUTIFUL serpent; figured in the work of Seba: length about two feet: colour above milk-white, with a triple row of black spots down the upper part, the middle range being divided by a narrow fillet of the white ground-colour: sides and abdomen tinged with yellow: head white, large-scaled, and minutely speckled with black: tail rather short, and terminating somewhat obtusely: this species has the habit of a *Coluber* in some degree, and is said by Seba to be smooth, round, and plump, with an obtuse tail.

 RUFOUS SLOW-WORM.

Anguis Rufa. *A. tota cupreo-rufa*.

Slow-Worm entirely of a coppery rufous colour.

Amphisbæna Amboinensis, *squamis rubicundis obducta*. *Seb.* 2. t. 7. f. 4.

LENGTH about a foot and half: thickness moderate: colour a uniform high rufous or coppery brown, with a white spot near the tip of the tail: scales of moderate size, rounded; and each marked by a dusky central speck: native of Amboina.

RETICULATED SLOW-WORM.

Anguis Reticulata. A. rosea, squamis rhombeis cute interjecta alba reticulatis.

Rose-coloured Slow-Worm, with rhomboid scales, reticulated by the interstitial white skin.

Amphisbæna Amboinensis, corio quasi reticulato conspicua. Seb. 2. t. 7. f. 3.

OF similar size and habit with the preceding, but of a strong or deep rose-colour, covered with rhomboid scales, so placed as every where to leave decussations of white between the several rows, the skin appearing through the interstices: along the sides are a few oblong white patches, which form a kind of fasciæ as they approach the tail, the tip of which is white: the head is also obscurely surrounded by a white zone: native of Amboina.

SNOUTED SLOW-WORM.

Anguis Nasuta. A. atroviresens, subtus flava, naso elongato.

Greenish-black Slow-Worm, yellow beneath, with elongated snout.

Anguis rostratus. C. L. Weigel Mem. des Curieux de la Nature de Berlin, 3. p. 190.

Abdominal scales 218, subcaudal 12.

DESCRIBED by Mr. Weigel in the Berlin Memoirs: length about a foot: colour greenish black above, and yellow beneath, extending in some parts a little way up the sides: upper lip consider-

ably longer than the lower, and marked on the tip by a yellow spot: tail terminated by a horny tip, and marked by a yellow spot and two oblique yellow bands: native of Surinam.

JAMAICA SLOW-WORM.

Anguis Jamaicensis. A. subargenteo-fuscescens, corpore sensim incrassato, cauda abrupte subacuminata.

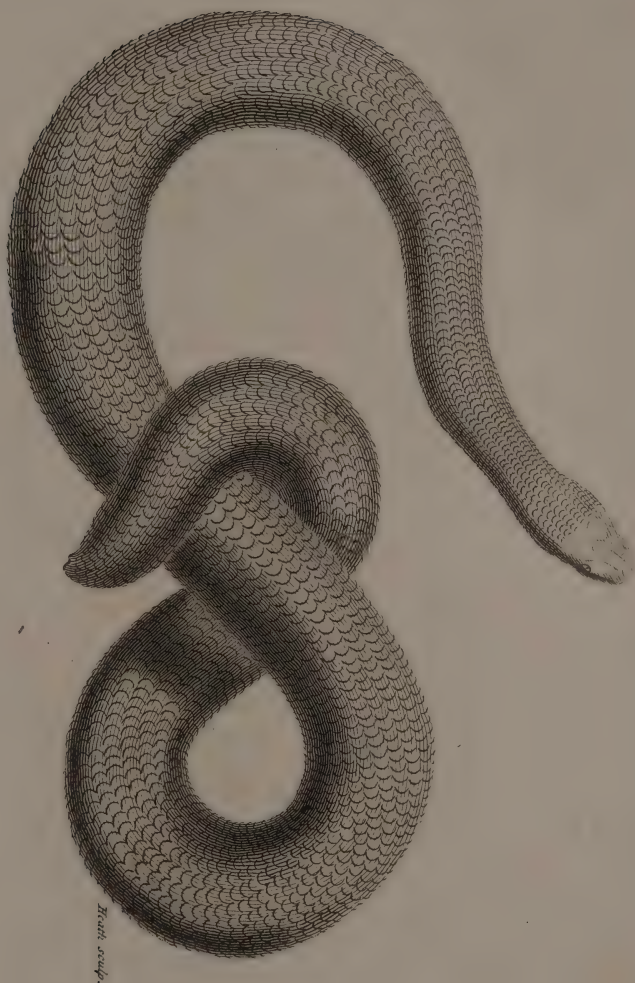
Silvery-brownish Slow-Worm, with the body gradually thickening, and the tail abruptly subacuminate.

Amphisbæna subargentea. Silver Snake. *Brown Jam. p. 460. pl. 44. f. 1.*

Serpens Cæcilia ex Mauritania. *Seb. 1. t. 87. f. 2.*

Anguis lumbricalis? *Lin. Syst. Nat. p. 391.*

THE length of this species, according to Brown, in his History of Jamaica, seldom exceeds sixteen inches, and the diameter of the animal gradually increases from the snout to the tail, which is extremely short, and terminates in a slightly pointed extremity: it is found about the roots of decayed trees, near ants' nests, &c. and though popularly considered as poisonous, is entirely innocuous: its colour is a uniform pale brown, with a kind of silvery gloss on the scales, which are extremely smooth, resembling in some degree those of the Scink.



JAMAICA SLOW-WORM.

PUNCTULATED SLOW-WORM.

Rondoo Talooloo Pam. *Russ. Ind. Serp. p. 48. pl. 43.*

A SMALL species, about six inches in length, and of the diameter of a hen quill, cream-coloured, and powdered with innumerable black dots: tail most extremely short and subacuminate. This species is described in Dr. Russel's work on the Indian Serpents: it is common in *Vizagapatam*, and is vulgarly considered as mischievous: it moves with incredible swiftness, and a specimen immersed in spirits remained alive more than ten minutes.

Dr. Russel describes and figures a larger species under the same name, which seems to be no other than a variety of the *A. Meleagris*, differing in having a longer tail than usual.

CLIVIAN SLOW-WORM.

Anguis Clivica. *A. ex cinereo fusca, frontis scuto majori cordato.*
Cinereous-brown Slow-Worm, with a large cordated frontal scale.

Anguis Clivicus. *Lin. Lyst. Nat. Gmel. p. 1122. Gesn. Serp. p. 69.*

Abdominal scales 177, subcaudal 37. *Gronov.*

SAID to be frequent in the Dutchy of Cleves, but seems a species not yet completely described.

SEBAN SLOW-WORM.

Scytalæ Americanæ. Seb. 2. t. 2. f. 1, 2, 3, 4.

A SMALL species, figured and slightly described in the work of Seba: length about ten inches: general proportions those of the common Slow-Worm: colour very pale yellowish brown, thickly speckled with pale blue, brown, and black spots: head in some specimens reddish, in others blue: native of South America.



1811. 1812.

WHITE AMPHISBENA.

AMPHISBÆNA. AMPHISBÆNA.

*Generic Character.**Corpus* teres, æquale.*Annuli* trunci caudæque.|| *Body* cylindric, equal.|| *Annular divisions* both on
body and tail.

WHITE AMPHISBÆNA.

Amphisbæna Alba. *A. tota alba.**Amphisbæna* entirely white.*Amphisbæna* alba. *Lin. Syst. Nat. p. 393. Mus. Ad. Frid.*
*p. 20. t. 6. f. 2.**Serpens Cæcilia Americana. Seb. 2. p. 25. t. 24. f. 1.*

THE remarkable genus *Amphisbæna*, much allied to that of *Anguis*, and even, in some degree, to that of *Lacerta*, is very readily distinguished by the manner in which the exterior surface of its skin is marked into well-defined numerous circles or rings completely surrounding the body, and divided in a longitudinal direction by still more numerous strait lines; thus forming so many square or parallelogrammic scales. Only two species of this genus have hitherto been discovered, of which the present is the largest, measuring from fifteen or eighteen inches to two feet

or more in length, and being of a considerable thickness in proportion: its form is equally cylindric throughout; the head, which is covered with large scales, being of scarce greater diameter than the body, and the tail, which is very short, terminating in a rounded extremity. The colour of this species is white, but in some specimens tinged with pale rose-colour, while in others the head and back incline to a pale yellowish or brownish cast: the head is very short, the eyes very small, the snout obtuse, the mouth of moderate width, the teeth short, strong, not very sharply pointed, and constituting a single row of about fourteen or sixteen in each jaw: the tongue is very large, broad, thick, flattish, and bifid only at the tip, the surface of the base appearing scaly: the tail, in specimens of about two feet, is scarcely more than two inches* in length: the usual number of circles in this snake is observed to be about two hundred and twenty-three on the body, and sixteen on the tail. It is a native of South America, where it is found in woods, preying on insects, worms, &c. It is a harmless animal, but it is said that on handling it for some time the skin becomes affected with a slight itching, accompanied by small pustules, owing to an acrimonious moisture, exsuding from the animal.

* In the Museum Adolphi Friderici the tail of this species is mistakenly said to be a sixth part of the whole length instead of a twelfth.



EFFLIGINOUS AMPHISBENA.

FULIGINOUS AMPHISBÆNA.

Amphisbæna Fuliginosa. *A. albo nigroque varia.*

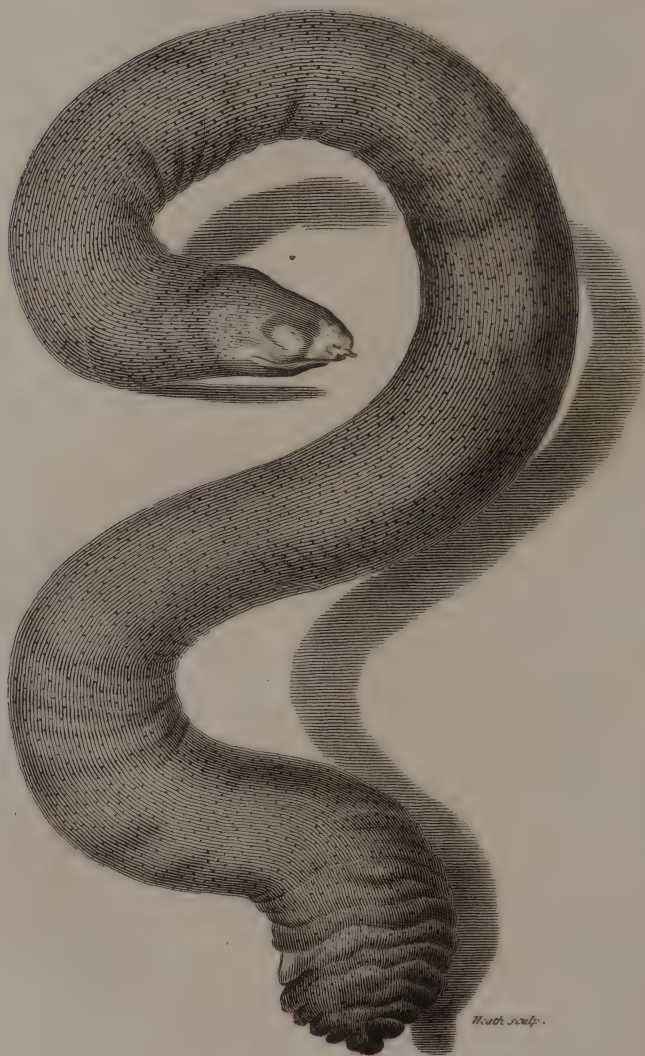
Amphisbæna with black and white variegations.

A. fuliginosa. *Lin. Syst. Nat. p. 923.*

Amphisbæna, Apamea, &c. &c. *Seb. 1. t. 88. and 2. t. 118.*
22. 24. 73. 100, &c.

THIS, which seems rarely to equal the preceding in size, is at all times readily distinguished by its colours; the general cast being a purplish or blackish brown, variegated in an irregular manner on all sides by scattered and broken patches of yellowish white, the outlines or divisions of each variegation being always rectangular: the general form is the same as in the preceding species, but the head is rather longer in proportion: the skin is very strong, and the divisions both of the annuli and scales extremely distinct or strongly marked: sometimes it varies in its colours, exhibiting pretty vivid variegations of yellow on a purple or violet ground-colour; and at other times an equally remarkable contrast of black and white: it is probable that in the living animal there is always a cast of purple or violet in the ground-colour, and of yellow in the variegations. It is by no means uncommon in many parts of South America, resembling the former species in its manners, and being equally innoxious. The Count de Cepede observes, that above the vent is a row of small perforated papillæ, similar to

those in many of the Lizard tribe. The skin of the Amphisbænæ is remarkably strong and tenacious, and of a smooth or glossy surface, and it is probable that they are enabled with great facility to perforate the ground somewhat in the manner of earthworms, in order to obtain occasional supplies of food.



EEL-SHAPED COECILIA.

CÆCILIA. CÆCILIA.

Generic Character.

<i>Corpus teres, æquales.</i>	<i>Body cylindric, equal.</i>
<i>Rugæ laterales trunci caudæque.</i>	<i>Wrinkles on the sides both of body and tail.</i>

EEL-SHAPED CÆCILIA.

Cæcilia Tentaculata. C. anguilliformis, rugis distantibus, rostro tentaculato.

Eel-shaped *Cæcilia*, with distant wrinkles and tentaculated snout.

Cæcilia tentaculata. Amoen. Acad. 1. p. 498. t. 13. f. 1.

L'Ibiare. Cepede Ovip. p. 466. pl. 21.

THE length of this species is about a foot, and its general appearance that of a small Eel: its colour is a livid brown, the abdomen paler or whitish: the head is not larger than the beginning of the trunk, and it is of a somewhat taper form, the upper lip projecting beyond the lower: the eyes are extremely small: the nostrils seated at the tip of the snout, and immediately beneath each is an extremely small cirrhus or beard: the mouth is furnished in each jaw with a row of very small sharp teeth: across the sides of the body, from

head to tail, run numerous, semi-annular, and pretty distinct furrows or wrinkles, which are about a hundred and thirty-five in number; those on the upper parts being moderately distant from each other, but becoming more close or numerous as they approach the extremity, almost immediately beneath which is situated the vent, there being, properly speaking, no distinct tail: the skin of the whole body when closely inspected, is found to be covered with extremely minute papillæ or granules. This animal seems to have been first described and figured in the *Amoenitates Academicæ*. It is a native of South America, and is said to be of an innoxious nature. The specimen in the British Museum measures at least eighteen inches in length, the wrinkles on the sides being a fifth of an inch distant from each other: those near the extremity the tenth or twelfth of an inch.

WHITE-SIDED CÆCILIA.

Cæcilia Glutinosa. *C. fusca, rugis confertissimis, linea laterali albida.*

Brown Cæcilia, with extremely close wrinkles, and whitish lateral line.

Serpens Cæcilia Ceilonica. *Seb. 2. p. 26. t. 25. f. 2.*

Cæcilia glutinosa. *Lin. Syst. Nat. p. 393. Mus. Ad. Frid. p. 19. t. 6. f. 1.*

This, which was first described by Seba, is about the same length and diameter with the former, but has a large, tumid head, and wider nostrils, with-



WHITE-SIDED CECILIA.

Hill engr.

out any appearance of tentacula: the colour of both head and body is deep brown, and along each side runs a broad whitish stripe; the wrinkles are extremely close and numerous, and disposed in such a manner as to form a slight carina along the sides on the white stripe. It is a native of South America: the individual described by Linnaeus in the *Mus. Ad. Frid.* is said to have had a small head, but in every other respect appears to have resembled Seba's specimen.

SLENDER CÆCILIA.

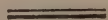
Cæcilia Gracilis. *C. fusca, lumbriciformis.*

Brown Cæcilia, resembling an earth-worm in shape.

Cæcilia tentaculata. *Mus. Ad. Frid. p. 19. t. 5. f. 2.*

LENGTH thirteen inches and three quarters: diameter, which is perfectly equal throughout, one fifth of an inch: skin smooth, but when closely examined appearing most minutely granulated: rugæ lateral, semi-annular, not strongly marked, and about the tenth of an inch distant from each other: head not perceptibly larger than the body, and obtusely tapering at the mouth: upper jaw longer than the lower, the mouth being placed somewhat beneath; about the eighth of an inch wide: teeth not distinctly visible, but may be felt in both jaws by means of a pin: nostrils small, rather distant, and seated at the tip of the snout on

each side : at a small distance between these are two minute papillæ or tentacula : vent immediately beneath the tip of the tail, small, and by its outline forming eight or nine crenatures round the foramen : rugæ for about an inch before the end closer than on the rest of the body : skin of the head perfectly smooth, or without the minute granulations dispersed over all the rest of the animal : no appearance of eyes : colour of the whole an uniform dull brown. It is supposed to be a native of South America*.



I CANNOT conclude the enumeration of the Serpent tribe without observing, that this branch of Natural History still requires much elucidation, and is, perhaps, of all others, the most liable to errors and uncertainties. The Linnæan characters of these animals, in the *Systema Naturæ*, are, from their extreme brevity, but ill calculated for general information, nor can it be surprising that they should now be considered as constituting little more than a mere series of memorandums relative to abdominal and subcaudal scales ; while many of the most remarkable serpents in the works of Scheuchzer and Seba, seem to have been entirely neglected, apparently for no other reason than that the number of these parts could not be ascer-

* In the Museum Adolphi Friderici it is figured under the name of *C. tentaculata*, and appears to be confounded with that species.

tained: as if the external form and colours of the animals were of no importance in the specific character. On this subject the observations of Mr. Schneider appear to be perfectly just.

“ *Ingenia curiosorum primus acuit Linnæus ad investigandas corporum naturalium atque animalium notas; verum postquam accedente philosophia et zootomia pomœria scientiæ naturalis multo latius promota fuerunt, raro curiosorum lectorum desiderio satisfaciunt breves amphibiorum notationes singulis speciebus in systemate Linnæano appositæ.*”

Mr. Schneider goes on to observe, that, unless a more ample mode of description be adopted, there is reason to apprehend that the authority of the Linnæan characters of the Amphibia, and of Serpents in particular, will become entirely obsolete.

“ *Aucto enim amphibiorum cognitorum numero, plures formæ notas cum pluribus speciebus communicari fuit necesse, quas ille, quibusdam proprias putaverat; plures etiam omisisse illum probabile est obscuras in exemplis junioribus vel vinaceo liquore nimis maceratis, vel contempsisse adeo velut inutiles, dum ipse nimis scutorum numero confidebat, quas deinde in adultis et recte cognitis exemplis eminentiores observavit curiosorum diligentia, vel assumere investigatas coegit dubitatio et criteriorum Linnæanorum cognita vanitas. Quod nisi fit, prope adest, ut verear, ne*

brevi omnis Linnæani Systematis auctoritas in enarranda serpentium historia naturali plane ut in metallorum historia factum est, evilescat. Compages quidem totius fabricæ jam omnes in postrema editione solutas esse video, atque ipsa fundamenta eo inclinare mihi videntur, ut ruina ædificii sit timenda."



EEL-SHAPED SIREN.

APPENDIX.

DUBIOUS AMPHIBIA,

OR

WHOSE REAL NATURE IS NOT COMPLETELY
UNDERSTOOD.

SIREN.

EEL-SHAPED SIREN.

Siren Lacertina. *S. bipes, corpore anguillæformi, branchiis ramosis.*

Two-footed Siren, with eel-shaped body, and ramified branchiæ.

Siren Lacertina. *Lin. Amoen. Acad. 7. p. 311. Syst. Nat. vol. 1. pt. 2. Addend.*

Muræna Siren. *Lin. Syst. Nat. Gmel. p. 1136.*

Amphibious Bipes, or Mud Inguana. *Ellis Phil. Trans. vol. 56. p. 189.*

Siren Lacertina. The Siren. *Nat. Misc. pl. 61.*

THIS species stands eminently distinguished in the list of animals by the ambiguity of its characters, which are such as to have induced the great Linnæus to institute it for a new order

of Amphibia, under the title of *Meantes**; an order, however, which does not stand among the rest of the Amphibia in the *Systema Naturæ*, but is mentioned in a note at the end of the second part of the first volume of that work.

The genus with which the Siren has evidently the greatest possible affinity, is the *Lacerta* or Lizard. It even very much resembles the larva, or first state of a *Lacerta*; and it is still doubtful whether it may not really be such: yet it has never been observed in any other state, having two feet only, without any appearance of a hind pair: the feet are also furnished with claws, whereas the larvæ of all the *Lacertæ* are observed to be without claws; or, in the Linnæan phrase, *digitis muticis*: the mouth has several rows of smallish teeth: the body is eel-shaped, but slightly flattened beneath; marked on the sides by several wrinkles, and slightly compressed towards the extremity of the tail, which is edged with a kind of soft skin or adipose fin, as it were: on each side the neck are three ramified branchial processes, resembling, on a larger scale, those belonging to the larvæ of water-newts, and at the base are the openings into the gills: the eyes are very small, and blue. The general colour of the animal is a deep or blackish brown, scattered over, especially on the sides, with numerous minute whitish

* The characters of this Order are thus given by Linnaeus, viz. *Branchiæ & Pulmones simul. Pedes brachiati, unguiculati*. The generic character stands thus, viz. *Corpus bipedum, caudatum, nudum. Pedes brachiati, unguiculati*.

specks. Its size nearly equals that of an Eel, being frequently found of the length of more than two feet. It is a native of North America, and more particularly of South Carolina, where it is not very uncommon in muddy and swampy places, living generally under water, but sometimes appearing on land. It has a kind of squeaking or singing voice, for which reason Linnæus distinguished it by the title of Siren.

This curious animal was first discovered and described by the ingenious Dr. Garden, who resided many years in Carolina, and who paid particular attention to the science of Natural History, which he enriched by many highly interesting observations. Dr. Garden communicated specimens of the Siren to Linnæus, with particulars relative to its history and manners. Linnæus, in his letter to Dr. Garden on this subject, declares, that nothing had ever exercised his thoughts so much, nor was there any thing he so much desired to know as the real nature of so extraordinary an animal.

The following particulars relative to the anatomy of the Syren are given by Mr. Hunter in the 56th volume of the Philosophical Transactions

“The tongue is broad and has very little motion: it has a bone similar to that in birds, turtles, &c. On the posterior and lateral parts of the mouth, are three openings on each side; these are similar to the slits of the gills in fish, but the partitions do not resemble gills on their outer edges, for they have not the comb-like structure. Above

and close to the extremity of each of these openings externally, so many processes arise; the anterior the smallest, the posterior the largest: their anterior and inferior edges and extremity are serrated, and formed into fimbriæ: these processes fold down and cover the slits externally, and would seem to answer the purposes of the comb-like part of the gill in fish.

“ At the root of the tongue, nearly as far back as these openings reach, the trachea begins, much in the same manner as in birds. It passes backwards above the heart, and there divides into two branches, one going to each lobe of the lungs. The lungs are two long bags, one on each side, which begin just behind the heart, and pass back through the whole length of the abdomen, nearly as far as the anus. They are largest in the middle, and honey-combed on the internal surface through their whole length. The heart consists of one auricle and one ventricle. What answers to the inferior vena cava, passes forwards above, but in a sulcus of the liver, and opens into a bag similar to the pericardium: this bag surrounds the heart and aorta, as the pericardium does in other animals: from this there is an opening into a vein which lies above, and upon the left of the auricle, which vein seems to receive blood from the lungs, gills, and head, is analogous to the superior vena cava, and opens into the auricle which is upon the left of the ventricle. The aorta goes out, passing for a little way in a loose spiral turn, then becomes strait, where it seems to be muscular: at this part

the branches go off, between which there is a rising within the area of the aorta, like a bird's tongue, with its tip turned towards the heart*.

“The liver is principally one lobe, pretty close to the heart at the fore part, and passes back on the right of the stomach and intestines; at its anterior extremity on the left side, there is a very short lobe ending abruptly. The gall-bladder lies in a fissure on the left side of the liver near its middle: there is no hepatic duct: the hepato-cystic ducts, which seem to be three in number, enter the gall-bladder at its anterior end or fundus, and the cystic duct passes out from the posterior end of the gall-bladder, and terminates in the gut, about half an inch from the pylorus. The œsophagus, which is pretty large, passes back, and is continued into the stomach in the same line. The stomach at the posterior end bends a little to the right, where it terminates in the pylorus. The intestines pass back, making many turns: at the posterior end they become pretty

* This account of the *venæ cavæ* opening into the cavity of the pericardium may appear incredible; and it might be supposed, that in the natural state of the parts, there is a canal of communication going from one cava to the other, which being broken or nipt through in the act of catching or killing the animal, would give the appearance above described. I can only say, that the appearances were what have been described, in three different subjects which I have dissected; and in all of them the pericardium was full of coagulated blood. But, besides the smallness of the subjects, it may be observed that they had been long preserved in spirits, which made them more unfit for anatomical enquiries. They had been in my possession above seven years,

strait, forming what may be called the colon, or rectum, where they are a little larger, and run to the vent in a strait direction. At the beginning of this larger part of the intestinal tube there is no valvular structure. The spleen is a very small but long body : its anterior end is attached to the upper surface of the stomach, and it is continued back along the left side of the mesentery, to which it adheres. The pancreas is a small body, lying above the duodenum, and is attached also to the left side of the mesentery. The kidneys are situated in the upper and posterior part of the abdomen, having the rectum below and passing between them, as in the snake, &c. Below the rectum lies a long bag like a bladder ; it adheres all along to the inside of the abdominal muscles, and its mouth opens into the rectum ; but whether it is the bladder or not I cannot tell. On each side of the rectum, close to the lungs, there is a body, the posterior end of which rests upon the anterior end of the kidney ; but what they are I cannot pretend to determine."

The celebrated anatomist Camper seems to have deceived himself in a singular manner, in his examination of this extraordinary animal ; asserting that it was destitute of lungs ; and, in consequence, considering it as breathing by gills alone, in the manner of fish, regarded it as a species of *Muræna* or Eel, in which genus it is accordingly placed in the Gmelinian edition of the *Systema Naturæ* ; under the name of *Muræna Siren*. The opinion of Camper, however, is now allowed to

be erroneous; and the Siren is unquestionably most allied to the Lizard tribe; though it still remains doubtful whether it should be considered as a larva, or as an animal in its perfect or ultimate form.

The lightness with which the Count de Cépède passes over this interesting subject cannot be observed without surprise: I have surveyed, says he, with attention the figure of this animal in the Philosophical Transactions, as well as its description by Mr. Ellis, and have not a moment's hesitation in pronouncing it to be merely the larva of a *Lacerta*.

“ Nous avons examiné avec soin la figure et la description que M. Ellis en a données dans les Transactions Philosophiques; & nous n'avons pas douté un seul moment que cet animal, bien loin de constituer un ordre nouveau, ne fût une larve.”

How different this from the sober investigation and philosophical doubts of the great Linnæus, as well as from the patient enquiries of a Hunter and a Camper!

The celebrated Amphibiologist Schneider, after declaring his own opinion, that the Siren is really no other than the larva of some undiscovered Lizard, thus expresses his sentiments relative to the Count de Cépède's decision on the subject.

“ Factum igitur casu potius puto, ut suspicio Galli de Sirene lacertina Linnæi proposita, p. 611*,”

* Histoire Naturelle des Quadrupèdes ovipares,

tam bene caderet, nec a scopo veritatis plane aberraret."—*Schneid. Amph. fasc. 1. p. 41.*

It remains to be added, that the Siren, if thrown on the ground with any degree of violence, has been observed to break in two or three places; in this particular resembling the *Anguis fragilis* or Slow-Worm. It is also proper to observe, that no Lizard of which it may be supposed the Larva, has ever yet been discovered in those parts of Carolina where it is most frequent. The species to which it seems most allied is the *Lacerta Teguixin* of Linnæus, which is a native of South America.

ANGUINE SIREN.

Siren Anguina. *S. quadrupes, corpore anguillæformi, branchiis ramosis.*

Four-footed Siren with eel-shaped body, and ramified branchiæ. *Proteus anguinus. Laurenti Spec. Med. p. 37. t. 4. f. 3.*

Austrian Siren.

THIS singular animal is found in as singular a situation; being an inhabitant of the celebrated and romantic Lake called Lake Zirknitz*, about six German miles from Labac, in the Dutchy of Carniola in Austria. From this lake, which is somewhat more than a German mile in length, and half as much in breadth, the water regularly retires during the summer, by numerous subter-

* Lugea Palus of the ancients.



ANGUINE SIREN.

Half size.

raneous outlets or holes at the bottom; leaving the ground dry, and fit for pasture, the cultivation of millet, &c. &c. as well as for various kinds of hunting and other amusements: but in the month of October it again returns, with great force; springing out of the passages before mentioned from a vast depth till the Lake is completely filled. It is situated in a hollow or valley, surrounded by rocky and woody mountains, in which are vast caverns, and is principally supplied by eight rivulets running into it from the adjoining mountainous region. Of this Lake, with a probable theory of its phænomena, an ample description may be found in the sixteenth volume of the Philosophical Transactions.

The species of Siren at present to be described is extremely rare, and is found, in the spring, and towards the decline of summer, in some particular parts of the above-mentioned lake, and commonly measures, when full grown, from about ten to twelve or thirteen inches in length; the largest specimens being near three quarters of an inch in diameter. It is entirely of a pale rose or flesh-colour, or even nearly white, except the three pair of ramified branchial fins on each side the neck, which are of a bright red or carmine-colour. Its general shape is that of an eel; the body being cylindric, till towards the end of the tail, where it becomes flat, and is attenuated both above and below into a kind of fatty fin, scarce distinguishable from the rest of the tail: the skin is every

where smooth and even ; the head of a somewhat depressed form, with a lengthened, obtuse, and widish snout, and has no external eyes : the mouth is moderately wide, and furnished with a row of very minute teeth : the legs are about three quarters of an inch in length ; the fore legs being situated almost immediately behind the branchial fins, and the feet furnished with three toes, without any appearance of claws : the hind legs are situated at a great distance backwards, towards the commencement of the tail, and are of the same appearance with the fore legs, but the feet have only two toes, which, like those of the fore feet, are destitute of claws. The motions of the animal, when taken out of the water, are, in general, extremely slow and languid ; as is also the case when kept in a vessel of water ; but when in its native lake, it is sometimes observed to swim pretty briskly, waving its body in a serpentine direction, in the manner of a leech.

The Anguine Siren is well figured by Laurenti, who seems to have been its first describer, in his work entitled *Specimen Medicum, exhibens Synopsis Reptilium*, under the title of *Proteus Anguinus*.

With respect to its real nature, Zoologists are not yet agreed : some imagining it to be the Larva of some species of Lizard, whose gradations have not been fully ascertained, while others, with perhaps equal probability, suppose it a complete or perfect animal.

Its anatomy is amply detailed by Dr. Schreibers,

in the 91st volume of the Philosophical Transactions. The chief abbreviated particulars are the following:

The *Eyes* are most extremely small, subcutaneous, and situated on each side the base of the rostrum or upper jaw, just before the bulging or projecting parts.

The *Tongue* is large and fleshy; loose at the point, but attached by the root to the lower jaw.

The *Stomach* is very large, and of an almost coriaceous nature.

The *Liver* is extremely large and long; appearing, at first view, to fill the whole cavity of the abdomen, so as nearly to hide the other viscera.

The *Lungs* consist of a pair of very long tubular canals or processes, each terminating in an oblong simple bladder which is not divided internally into cellular spaces, but merely separated into two cavities by an intermediate membrane, a communication between the two sides of the bladder being left by means of a large semilunar opening at the upper end.

The *Bones* seem to be of the same conformation and nature as in the Salamander: no ribs or sternum; but bones in the tail.

This animal appears evidently to be of a predacious nature; feeding on the smaller kind of aquatic animals; since one which was kept alive for some days in a vessel of water, was observed to discharge from its stomach several small shells of the genus *Helix*, and in the stomach of one which Dr. Schreibers dissected were found the head and

bones of a small fish. Its voice is a strong hiss, louder than might be expected from the size of the animal.

Upon the whole, as Dr. Schreibers observes, there can be no doubt that this animal bears a great affinity to the Siren lacertina, before described, having both gills and lungs; and, therefore, leaves us in equal uncertainty as to its being a larva or a perfect animal. It is, however, remarkable that, notwithstanding the most careful researches, during many years, and the frequent fishing which takes place in the lakes and caverns of the neighbouring country, at all seasons of the year, no animal has hitherto been detected of which it can possibly be supposed the larva.

FISH-FORMED SIREN.

Siren Pisciformis. *S. fusco-ferruginea, nigro maculata, branchiis ramosissimis, palmis tetradactylis, plantis pentadactylis.*

Ferruginous-brown Siren, spotted with black, with finely ramified branchiæ, tetradactylous fore and pentadactylous hind feet.

Gyrinus Mexicanus. Mexican Tadpole. *Naturalist's Miscellany, pl. 342, 343.*

THIS animal was first described in the Naturalist's Miscellany, from a well-preserved specimen in the British Museum. I shall, therefore, here repeat my former description from the above-mentioned work.

The animal here represented in its natural size is supposed to be native of Mexico, and though



FISH-FORKED SIREN.

Hill sculp.

perhaps no other than the Larva or Tadpole of some large American Lizard, seems a scarce less singular and curious animal than the *Siren*, so much and so long the subject of dubious speculation to Linnæus, and for which he at length instituted his additional order termed *Meantes*. In its general appearance it bears some resemblance to the larva of the *Rana paradoxa*, but is furnished with gills, opening externally in the manner of a fish: the openings are very large, and the operculum or external flap is continued from the sides of the head across the throat beneath, so as completely to insulate the head from the breast: the gills themselves consist of four semi-circular bony or cartilaginous arches, which are denticulated or serrated on their internal or concave part, like those of fishes: on the opercula or external flaps are situated three very large and elegant branchial fins or ramified parts, divided and subdivided into a vast number of slender or capillary processes. In these particulars it resembles the *Siren lacertina*, except that in that animal the external opening to the gills is very small; the mouth is furnished in front with a row of extremely minute teeth: the tongue is large, smooth, and rounded at the tip: the rictus or gape, when the mouth is closed appears considerably wider than it really is; owing to a lateral sulcus proceeding from each corner to some distance: the feet are entirely destitute of webs, and the toes are furnished with weak-

ish claws: the fore feet have four, and the hind feet five toes. Exclusive of the general colour of the animal, the whole skin when minutely examined, appears to be scattered over with very minute white specks, resembling those on the surface of the *Siren lacertina*. The sides of the body are marked by several strong rugæ or furrows, and an impressed lateral line or sulcus is continued from the gills to the tail*.

It may be added that the animal figured in the 4th volume of the American Philosophical Transactions and described by Mr. de Beauvois as a new species of *Siren*, seems much allied to the present, and may even be the same species, since it appears to agree in the leading particulars: the specimen, however, seems not to have been in the highest state of preservation, since no mention is made of any spots: its size is considerably smaller than that of the present ani-

* A species nearly allied to this is mentioned by Mr. Schneider, who examined it in the museum of Professor Hellwig at Brunswick. It was taken in the Lake Champlain, in North America, where it is said to be dreaded by the fishermen, who consider it as a poisonous animal. Its length is more than eight inches, and its diameter nearly an inch: it is soft, spongy, and porous, and is marked on each side by three rows of round black spots: tail ancipital, compressed, and spotted; lower edge strait; upper curved; tip roundish or cylindric. Head broad, flat; eyes small; teeth in both jaws conical obtuse, and rather long; tongue broad; mouth wide; lips like those of a fish: on each side the neck three branchial fins: feet four; distant; tetradactylous, and without claws.—*Schneid. Hist. Amph. fasc. 1. p. 50.*

mal; and the toes are represented as terminating bluntly. Mr. De Beauvois thinks, that, upon the whole, the Linnæan order *Meantes* should be preserved, until more detailed and enlarged observations on these animals shall have completely elucidated their real nature.

END OF VOLUME III.

